

**WIN**  
the iBook!  
pg. 81

New Reviews: iBook • DeskJet 970 • InDesign • Rainbow 6

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Mac OS 9  
Features Spotlight 2

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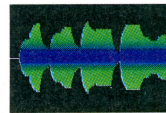
1. Sherlock 2. The ultimate Internet search tool is now your personal shopper as well. Sherlock 2 can pinpoint products you want and let you compare prices, availability, even the time left for items on auction. It's also the easiest way to locate people, news and just about anything on the web.



2. Multiple users. No matter how many people share your Mac, it will always be your very own Mac. Just log in and all your preferences are activated, from your favorite browser to your choice of desktop patterns. Your private folder is easily accessible until you log out.



3. Voiceprint password. Your voice is your password. When you log in, Mac OS 9 analyzes your voice to make sure you're who you say you are. If it's really you, you can get to work right away, with full access to your personal files. But if it's someone pretending to be you, access is denied.



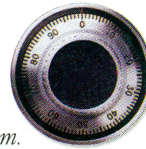
4. Keychain. No need to keep track of all those passwords and digital certificates for e-mail and web servers. The personal keychain built into Mac OS 9 will keep track of them for you. Just speak or type your password to unlock them all.



5. Automatic updating. Now keeping your operating system up-to-date is as easy as installing Mac OS 9. Automatically, over the Internet, it will download (and even install) the latest free updates for your Mac. So you can get the most out of your computer, without worrying about the chores.



6. Encryption. Now your private information can remain private, even when you transfer it over the Internet. Mac OS 9 offers built-in, industrial-strength encryption – so you can rest assured that your important files will remain secure, no matter where in the world you send them.



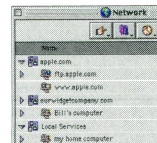
7. Internet file sharing. Mac OS 9's built-in file sharing now works over the Internet as easily as it works between two Macs in the same room. So you can set up shared folders that can be quickly accessed by any Mac user you authorize, around the corner or thousands of miles away.



8. Internet AppleScript. AppleScript lets you automate your Mac and your applications, from the simplest task to the most complex workflow. Now you can tap the power of AppleScript over the Internet. And harness the power of multiple Macs working together all over the world.



9. Network browsing. With Mac OS 9's built-in Network Browser, you can navigate your way around your LAN, your intranet or the Internet with ease. Now you can find file servers, FTP servers and web servers the same way you locate printers on your own local network.



all available in one must-have collection. So if you're the type who loves to explore the Internet, now is the perfect time to install Mac OS 9. Surfing's greatest hits, now only \$99\*. [www.apple.com](http://www.apple.com). 🍏 Think different.™







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## The **Holiday** Issue

### **Graphics Cards for the Neophyte** \_\_\_\_\_ **16**

*By Alex Handy*

You've heard about graphics cards, that they can process millions of triangles each second, but what does that mean to you, really? Should you buy one? Why would you want to process that many triangles anyway? Well, as it turns out, there's many reasons. Read this article and find out more.

### **Pockets o' Plenty** \_\_\_\_\_ **24**

*By David Weiss*

Don't think big, think small. Think pocket-sized, in fact. Handheld computers let you take it with you while you roam this wide and mysterious world. Whether your preference is Palm Pilots (well, OK, they're called Connected Organizers now), the new Visor (kinda like a Palm) or portable MP3-style music, there's a handheld out there waiting to be held in your great big hands, no doubt trembling with anticipation.

### **MacHome's Annual Holiday Gift Guide** \_\_\_\_\_ **32**

*By The Editors*

No cheese logs, snow globes or fruitcakes this year! Not with our gift guide in hand. Peruse this roster for the best gifts for that technologically minded special person in your life.



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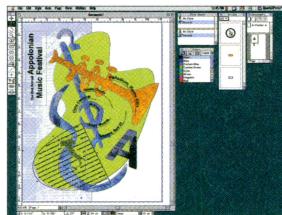
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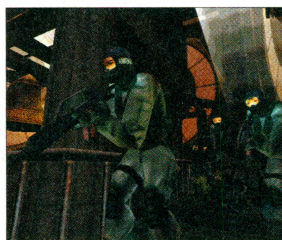
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- ★★★★★ Virtual PC 3.0
- ★★★★ Studio Artist 1.0.1
- ★★★★★ PhotoGenetics
- ★★★★ MacTicker 1.5
- ★★★★★ Adobe InDesign
- ★★★★★ QuarkXPress

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- ★★★★ Astra 2100u
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- ★★★★★ Pit Droids

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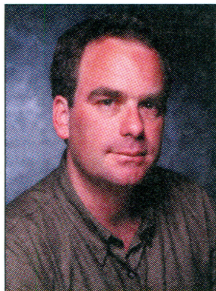
- ★★★★★ **Mac-nificent.** You gotta get it. No flaws.
- ★★★★ **Excellent.** Recommended even if it has a minor flaw or two.
- ★★★ **Average.** Despite problems, still a worthwhile product.
- ★★ **Below Average.** Has serious flaws that limit its usefulness or fun.
- ★ **Poor.** Avoid this product at all costs.



Indicates iMac/G3 compatibility



# from the chief [Editorial]



## Wait ... there's just one more thing

**I** don't watch much TV, but when *Columbo's* on, time stands still. Forget the lovably rumpled detective played brilliantly by Peter Falk; forget the melodramatic, self-indulgent overacting of the would-be villains, before they sheepishly give up. Ultimately, *Columbo* was about an outsider who could not be ignored.

These days, Steve Jobs is rather like *Columbo*. Not physically, mind you. Steve is a tall, commanding presence, sporting chiseled features and stylish threads. *Columbo* was forever sweaty, mumbling, and ill-mannered. Yet each man's opponents consider him a nuisance, an annoying gnat that must be dealt with politely but isn't really much of a threat. And like *Columbo*, Jobs' presentations save the most punch for last, when he's about to walk away but then turns and says, "Oh wait. There's one more thing." Then he makes an astonishing announcement.

*Columbo* fans know how this goes. The criminal has his it all figured out, except for some ridiculous little detail that *Columbo* somehow picks up on. "Wait, sir — there's just one little thing that's still bothering me," he'll say, interrupting a cocktail party. "You say you're allergic to feathers, sir, but your stateroom on the ship had down pillows, and room service says no one called for a replacement pillow. Why is that, sir? Did you bring your own pillow, one of those inflatable deals maybe?"

And with Jobs, it's the same. Those big companies that make PC clones, they're smug and cocksure. Apple — ha! "It is to laugh," they smirk. As long as they slavishly follow whatever directives come from Intel and Microsoft, things will be fine.

And along comes Steve Jobs, looking and acting nothing like the corporate clones who run most computer firms. He's not talking megahertz; he's talking colors. He says hardly anyone uses floppies anymore; let's dump 'em. Hey, he says, check this out — we built a wireless computer! So offhand, so casual ... but so serious too.

Before long, the other companies realize he's on the right track — though most cling to their corporate visions of antlike conformity. During the last year, as the iMac logged phenomenal sales and Apple turned in a solid financial performance, other established PC companies had a pretty hard time, characterized by layoffs, falling prices, prolonged court battles, and so forth.

Meanwhile, back in Cupertino, the Apple elves didn't worry about fitting in any longer, deciding to put their efforts into more and better computers. Now we've seen the current "one more thing" — actually three new things — and it's no revelation about down pillows. It's three new models of iMacs that have new video features, outstanding new designs, and prices for the people.

Some complain that you can get PCs for free or for \$400 with Internet service. Well, now you can get Macs at a discount too, if you sign up with Compuserve.

One more thing — Macs still aren't free, but I'm betting there are still a lot of folks out there who believe you get what you pay for.

John Poultny, Editor

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# Write On

[Your Letters]

## Be Afraid ... Be Very Afraid

I just purchased my iMac in all its blueberry glory. And so far I love it. I haven't ventured onto the Internet yet, as I'm still in awe of owning my very first computer. I guess I'm still a little nervous about logging on, and I need to have a question answered first. After I've obtained an email address, does that mean anyone can access my computer? Not that I have anything to hide, but I need to know.

Sarah J. Havener

☞ *Nothing to hide, eh? If we had a nickel for every time we heard that one. But seriously, here's the deal. Under normal usage, merely using an Internet connection for the occasional surfing and sending email will not result in anyone being able to access your computer, as in accessing your files in your hard drive. Beware, however, of giving out information about yourself — particularly in online discussion forums — and in using your email address to participate in newsgroups. If unscrupulous folks find your email address, they'll sometimes send you spam, or unsolicited messages.*

An extremely unlikely possibility exists that someone could access your computer if you remain connected to the Net for extended periods of time. However, we must stress that this almost never happens, and when it does, it's much more common on Windows than on Macs, and it usually only happens if you're operating a Web server (to publish a Web page). Security concerns like this are one of the reasons the U.S. Army switched from Windows NT to Mac OS for its Web servers.

If this stuff concerns you, there are solutions. Check out our write-up on Integro's NetBarrier, for example, on page 10. It alerts you to incoming requests on your

computer. There's a demo of it on this month's CD-ROM, come to think of it.

## CloseView Revisited

I am visually impaired and I have recently subscribed to your publication and installed Mac OS 8.6. So, I was interested when I read Sean J. O'Brian's letter in your October issue regarding CloseView, a feature of Mac OS 8.6, which allows you to enlarge the print on the screen. I have tried screen magnification but I became frustrated when I could not easily control the mouse. So, I switched to OutSpoken, a screen reader that allows me to navigate the screen using the numeric keypad instead of a mouse. I just love it!

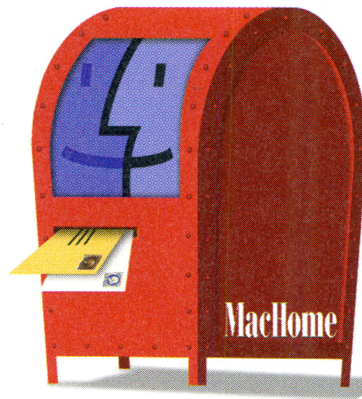
However, I am curious about CloseView. How does it work and how do I access it? Perhaps you can enlighten me and other visually impaired Mac users who might benefit from this utility.

Abbie Johnson

☞ *CloseView is a Control Panel that magnifies everything on your screen up to 16 times its normal size. It can also invert the colors of your display, so that for example, black text on a white background becomes white text on black. It's activated just by turning the Control Panel on, and you can download it from Apple at [www.apple.com/education/k12/disability/universal.html](http://www.apple.com/education/k12/disability/universal.html), if you don't already have it.*

## Huzzah for SuperDisk!

In your October issue you reviewed the new Imation 2x SuperDisk drive and gave it a 4-1/2 Apple rating. I just purchased this drive and feel that your review is right on the money. This has to be one of the best computer peripherals



I've ever bought for any computer I've owned. Not only is it well built, but it's far faster than I expected.

The increased speed at which it can read standard 1.4MB floppies is worth the purchase price alone! It makes archiving your old disks quick and painless. I've used several Zip drives over the years and had nothing but problems with their unreliable media. SuperDisks hold more data, and they're more durable and reliable. I hope Apple decides to include SuperDisk as standard equipment in upcoming models. The option of using both floppies and SuperDisks in one drive not only saves space but makes perfect sense too. Long live the SuperDisk!

Adrian Mroczko

☞ *Uh ... do you work for Imation, sir? If so, we'll find out. Oh yes.*

## Adverb or Adjective? You be the Judge

On page 16 of your October 1999 edition, I was not impressed by the headline "Learn Different" by Alex Hadley [sic — his surname is "Handy."]. Learn different and learn wrong!! Learn differentLY may not sound as cute as the erroneous way you titled this article, but it would be correct English usage. What are you trying to do? Teach (or as you would have it, "learn") kids the wrong way? Come on, Mac people — aim high, shoot for excellence. Don't join all those who are dumbing down the world. Don't set a lazy, sloppy example — police yourselves, indulge in good English. Otherwise, you become objects of scorn and derision. Okay?

Alexandra Moffat



## Hard to Believe, Pt. 1.

In the September "Back to Basics" ("You Ask, We Answer"), a reader was complaining that since she bought her G3 she could not stay connected to her ISP. I had a similar problem. After many phone calls to my ISP and to Apple, it was finally determined that the Apple 56K internal modem in my new G3 was defective. I live in an area where the nearest Apple service is over 50 miles away and Apple gave me a really bad time regarding doing an in-house warranty service call (they finally did). I found it hard to believe that Apple's policy does not permit them to send a replacement part via overnight mail and have the defective part returned to them as many other companies do.

John M. Leitch

## Equal Time, Please

The October issue promoted Websites of environmental activists. To be fair about this, please provide the Websites of the trade associations of the producers of the food, vehicles, computers, furniture, chemicals, printing presses, and the other things we (and the environmentalists) need in order to survive. Please don't ruin the magazine by encouraging readers to join a political movement.

Larry Chabot

✍️ *Despite differences in opinion about the definition of survival, "Bookmarks" is a selection of the author's favorite Websites and is not required to give equal time to Websites of opposing viewpoints. Get your own magazine.*

## We Don't Got to Show You No Stinking Badges

I was very interested in the September issue's editorial. As it happens I was at the convention center as well. Macworld Expo looked interesting, but I continued on to the Law Enforcement Expo. There was an important difference between the two: Macworld was a promotional event that cost \$40 for the day, while the Law Enforcement Expo was free. And you'd be surprised at the number of computer applications shown at the Law Enforcement Expo. But please note — you wouldn't have been admitted to that expo unless you carry a badge.

Eugene Souberman

## Andy Ihnatko Colored My World

Amen to Andy Ihnatko's column in your October issue, questioning the wisdom of removing the colors from the Apple logo. I miss my colored Apple and I think whoever decided to drop it should be painted blue! PS: I like Andy's new picture. That's some kinda hat.

Raeann Gooch

write us!

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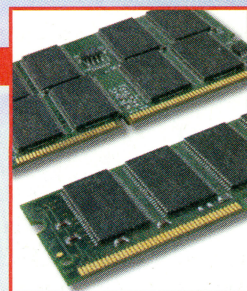
# iMAC RAGEOUS

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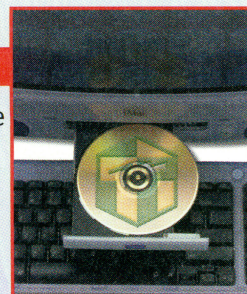
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## They've Done It Again

Second-Generation iMacs Deliver on the iMac Promise

**J**ust over a month after the stunning announcement of the Apple Power Mac G4 desktop computers, and just over two months after unleashing the iBook, Apple introduced three reconfigured iMacs, zooming in on digital video as the next Macintosh frontier.

The second generation of iMacs was announced October 5 at a "special event" for Apple employees and the press at the Flint Auditorium in Cupertino — the same place where Steve Jobs, Apple's interim CEO, unveiled the first Macintosh a generation-and-a-half ago. It was a sweet day.

The three new iMac models — **the iMac**, **the iMac DV** (short for Digital Video), and the **iMac DV Special Edition** — are available and range in price from \$999 to \$1,499. As with desktop publishing a generation ago, Apple now envisions digital video as the ultimate consumer/business obsession and, of course, the iMac as *the* digital video machine.



### The Next Generation

What all three second-generation iMacs have in common is sleekness, translucence, silence, and competitive prices. All are smaller than the original iMac. All feature PowerPC G3 processors, a Rage 128 high-end graphics accelerator chip for gamers, and a screaming audio system designed in collaboration with Harman Kardon, complete with a space-age-looking optional sub-

woofer called iSub (which ships in November for \$99 and connects via USB).

There's a slot-load 24X CD-ROM drive (or 4X DVD in the DV models) that replaces the older slide-out tray (the thing literally sucks in and spits out your CDs with a minimum of handling), and fanless operation that cuts out much of the noise associated with running your computer.

All three new iMacs work with AirPort, the wireless networking technology that Apple introduced with the iBook. But now, memory upgrades and the AirPort wireless networking card are easier to install, thanks to a redesigned access door that simply opens and closes.

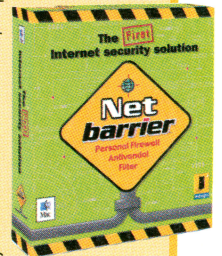
The iMac and iMac DV both come with 64MB of RAM (expandable to 512MB), while all three models include dual independent 12 Mbps USB ports, a 56K modem, and 10/100Base-T Ethernet for connection to networks, cable modems, and DSL modems. Apple has nearly doubled the system bus bandwidth to 100MHz in the new models. In addition, the new iMacs have an instant startup system and programmable function keys — features taken directly from the iBook.

While the new iMacs look much the same as the old ones from a distance, some design refinements have enhanced their usability and, dare we say, beauty. They are

## Feeling Insecure?

**I**f you're not, consider this.

Hackers, scammers, troublemakers, and criminals — they're swarming the Internet. How do you protect your confidential business communications, passwords, or credit card numbers?



**NetBarrier**, from Intego, is a personal-security software package that includes an integrated firewall, anti-vandal, and Internet packet-filtering technology for home and small-office users. Designed for ease of use and with a price tag of \$150, NetBarrier protects your privacy online as well as the information on your hard disk. (See the NetBarrier demo on our CD-ROM.) Install NetBarrier on your Mac to protect against Internet-traffic and local-network (such as AppleTalk) security breaks perpetrated by evil people who destroy, alter, or steal information.

Intego, 305-629-3501,  
[www.intego.com](http://www.intego.com)

## ArcSoft Creative Imaging Tools

**A**rcSoft has introduced a trio of reasonably priced photo editing packages for the Mac: **PhotoPrinter 2000**, **PhotoMontage 2000**, and **PhotoFantasy 2000**, scheduled to ship in mid-October.

PhotoPrinter 2000, for \$20, lets you add frames or borders and otherwise personalize your photos.

PhotoMontage 2000, for \$40, lets you create a single image that is actually made up of thousands of micro images.

PhotoFantasy 2000, for \$20, lets you capture an image live via a digital or desktop video camera and place it against a fantasy background. Fantasy templates are included.

ArcSoft, 800-762-8657, [www.arcsoft.com](http://www.arcsoft.com)



## Apple continued

several inches shorter than the previous models, with a more compact, horizontal hardware design, that allows you to see right through the casing. And let's not forget the high-resolution 15-inch color monitor.

The software bundle includes PageMill, Adobe's low-end Web authoring program, Quicken Deluxe financial planning software, AppleWorks business package, Microsoft Internet Explorer Web browser, Microsoft Outlook Express *email* program, 3D games, and more.

### Three Faces of iMac

There are significant distinctions among the three new iMac models, however, that account for their range in price.

For those on a budget, the basic iMac (now in blueberry only) goes for \$999. This model features a 350MHz G3 processor, 64MB of memory, and 6GB of hard disk space. If you sign up for an Internet connection with CompuServe (and stick with it for three years) you can get a \$400 rebate on this iMac, which brings the price down to \$599. However, to get the rebate you must purchase it at CompUSA or J & R ComputerWorld.

The iMac DV, at \$1,299, has all the features of the basic iMac, but it comes with a 400MHz processor, 10GB of storage space, two 400-Mbps FireWire ports, a slot-loading DVD drive (which also plays those CD-ROMs), and the new iMovie video-editing application that lets you make your own movies. This mid-range iMac comes in all the iMac flavors we have come to know and love.

Whereas the original iMac is fruity but opaque, the new iMac DVs are totally translucent. You can actually see right through them, and thus the colors — tangerine, strawberry, blueberry, grape, and lime — look more brilliant, when in fact they are softer and clearer.

The DV models also include a DVD of Disney/Pixar's *A Bug's Life* so you can watch your first DVD movie right out of the box. Significant for many is the addition of RGB video out, which allows you project whatever is on your screen onto a TV or VCR.

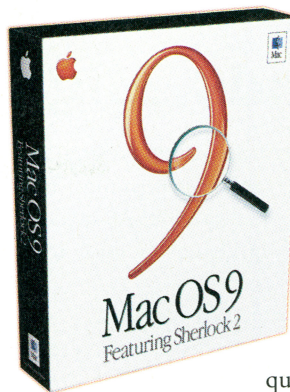
For \$1,499, you can get the ultimate package: the iMac DV Special Edition in the cool new graphite color of the Power Mac G4s. With all the same components of the iMac DV, you get 128MB of RAM and a 13GB hard drive.

### On Location

Bundled with the iMac DVs, Apple introduced its new video application called iMovie, which eases you into home and classroom video creation. iMovie — essentially a consumer version of Apple's QuickTime-based FinalCut Pro — makes use of the iMac DV's FireWire port to transfer video from a digital camcorder into the iMovie application.

A simple graphical user interface lets you assemble video clips, music, special sound effects, a host of transitions, and even rolling credits. All composition is done on the screen via drag-and-drop.

You can save the movie on your iMac hard drive, transfer it back to the camcorder, or make copies of it in digital or VHS videotape. The completed movies can also be posted to a Website or be emailed.



### Look Ma, No Fan!

Apple says that the new iMacs are the first computers to ship without a fan since the original Macintosh was introduced in 1984. The new iMacs, which sport a vented handle, are convection cooled for a nice, quiet ride.

### Tracking Mac OS 9

None of the new iMacs will ship with **Apple's Mac OS 9** because it will not be available until October 23. Thus the new iMacs ship with Mac OS 8.6.

The Mac OS 9 upgrade will cost \$99 and feature Sherlock 2, a killer Internet (and hard drive) search utility; Keychain, which unlocks all of your passwords; voice activated log-in; multiple-user features; encryption; auto updating; file sharing; AppleScript over the Internet; support for the Palm OS; and a ton of additional software.

However, if you purchased a new Mac on or after October 5, you can upgrade to Mac OS 9 for \$20. A \$20 rebate is also available to some owners of Mac OS 8.5 and 8.6.

Apple, 800-665-2775, [www.apple.com](http://www.apple.com)

## Welcome Home: You've Got Email

**I**magine walking into your house, going to the phone answering machine to retrieve your messages, and checking your email — without turning on your computer. You can, with **eView 100**, a device from Notify Technology that connects to your telephone.

With the eView 100 device, you can instantly check the first 10 email messages from up to five email accounts. You will be able to tell who has sent you email, the header information, whether there is an attachment, and the total number of messages for that account. It also lets you filter out spam.

If you buy eView 100 online at [www.visualgotmail.com](http://www.visualgotmail.com), it costs \$60, with service charges of \$5 a month. Prices vary according to service provider. eView 100 works in conjunction with Notify's Visual Got Mail service, and it lets you combine voicemail, caller ID, and email notification.

Notify Technology, 408-777-7920, [www.notifycorp.com](http://www.notifycorp.com)





## Small Hands, Big Ideas

**L**et's face it. As computer users get younger and younger, their special needs must be taken into consideration. One obvious, but often overlooked, item is the keyboard—designed for your adult hands, but way too big for them!



Datadesk Technologies has remedied that with **LittleFingers**, a fully functional keyboard, that is specifically designed to fit smaller hands. LittleFingers, which sells for \$100, is not a toy, but rather has the same quality and function as your own keyboard, with a layout that includes smaller key caps and spacing to better fit the kids, plus a three-button trackball. It even has a built-in wrist rest. It's available in ADB now and USB later.

An adult sized keyboard can be plugged into LittleFingers, allowing both keyboards to be used together. Mario Teaches Typing 2 software is included.

*Datadesk Technologies, 888-327-8868, [www.datadesktech.com](http://www.datadesktech.com)*

## Backpack Your Mac

**Y**ou're the kind of mule that carries everything on your back — except your G3 PowerBook, which you've always had to tote in its own special briefcase. Drag! Now, however, your most precious possession can join your other belongings in the Fellowes **Computer Backpack**, which goes for \$60.

Fellowes redesigned its horizontal Pro-tec-tor Pak, a protective case that safeguards the computer, to a vertical style that fits into the backpack's main compartment. The Pro-tec-tor Pak is made of lightweight, high-density padding, which you can remove if you want to use the backpack without your computer. The Pro-tec-tor Pak cannot accommodate the iBook, but without it, the backpack can easily hold your blueberry or tangerine companion as well.

*Fellowes, 800-945-4545, [www.fellowes.com](http://www.fellowes.com)*

## Dazzle 'em with Pictures

**S**o you've recorded the family holiday video, and now you want to get some individual snapshots from it and email them to your friends. You can do that with Dazzle Multimedia's **Digital Photo Maker**. It's a USB device that lets you capture, edit, manage, and publish MPEG video files and high-resolution digital images.



For \$99, you can capture your images from any video source or MPEG video file. You can then crop your image as well adjust the brightness/contrast, color saturation, and sharpness. This product features one-button Web-page publishing in RealVideo format, integrated image and audio file management, MP3 audio record/playback, and one-button photo email. A software bundle gives you everything you need to get started.

*Dazzle Multimedia, 888-436-4348, [www.dazzle.com](http://www.dazzle.com)*

## USB/FireWire — Your Choice

**S**ay you've got some Macs with USB connections but need the faster FireWire connection for newer peripherals, and especially for digital video. Or perhaps you have an older Mac. Orange Micro has come out with the **OrangeLink FireWire/USB PCI Board**, a single PCI expansion card with both USB and FireWire. The device, which will be available in November for \$159, is a 7-inch card with two USB and two FireWire ports.

The board comes with software packages allowing you to connect Digital Video (DV) camcorders to the FireWire ports for input, output, and video-editing functions. Adobe Premiere LE is included for the novice video editor, but the product will also work with Apple Final Cut Pro and the full version of Adobe Premiere 5.1c.

*Orange Micro, 714-779-2772, [www.orangemicro.com](http://www.orangemicro.com)*

## Cut Yer Glare

**I**f you've got a Mac G3 or G4, you can cut down on the screen glare and radiation that lead to eyestrain, headaches, and fatigue with **3M's anti-glare computer filter**.

Specially designed for the Apple 17-inch Studio Display, and compatible with the Graphite G4 models, the filter sports an ice-colored frame to match your Mac and sells for \$100. As part of the Expressions line of anti-glare computer filters, it features Scotchguard protection, an easy-to-clean surface, and an anti-reflective coating on the glass to reduce glare.



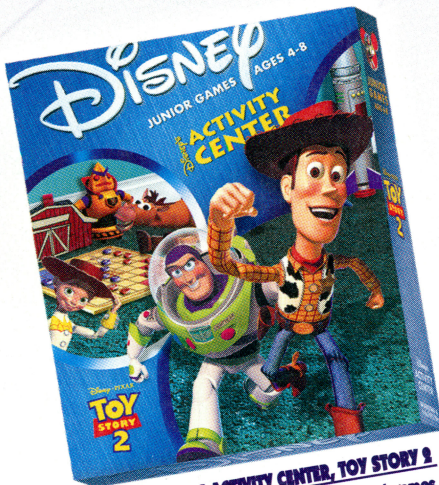
*3M, 800-364-3577, [www.3m.com](http://www.3m.com)*



# The Toys Are Back And Now They're On Mac!

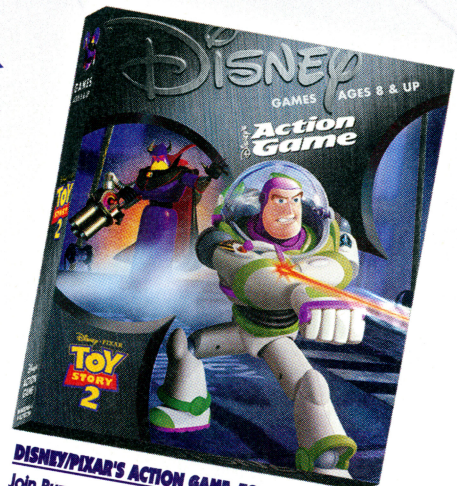


Where the movie ends,  
the fun begins!



**DISNEY/PIXAR'S ACTIVITY CENTER, TOY STORY 2**  
Toy Story 2 comes to life in six fast-paced games and creative activities for hours of hilarious fun. It's a blast for the entire family!

## Disney • PIXAR **Toy Story 2**



**DISNEY/PIXAR'S ACTION GAME, TOY STORY 2**  
Join Buzz and your favorite Toy Story 2 characters on an action-packed 3-D adventure to rescue Woody and battle the evil Zurg and his army of robots.



www.disneyinteractive.com, part of Go Network

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## Get on the USB Bus

If you find yourself having to combine different types of connections with your USB Mac, such as serial, Ethernet, and SCSI, you could get tangled up in a whole confusing mess of wires and adapters. But things don't have to be that way if you use the Belkin's new **BusStation**, which ships in mid-November.

The BusStation basic 7-port hub, for \$89, is a modular system that lets you connect keyboards, mice, printers, scanners, joysticks, modems, or any other peripheral to a single USB port on your Mac.

Now, this isn't just any old hub. Its vertical design is customizable such that you can slide individual modules in and out of the BusStation sleeves. Belkin's modules include USB SCSI adapter (\$79), USB Ethernet Adapter, (\$70), USB Serial Adapter (\$79), and 4-Port Hub (\$49). And, get this: You can even remove a single USB port from the BusStation and replace it with a four-port hub, adding more USB ports to your Mac. How can this be done? Easy. All you have to do is slide off the sleeve of any module, and slide it into the BusStation base. That's it.

Oh, and one more thing...the port modules also come with iMac color sleeves. Belkin, 800-223-5546, [www.belkin.com](http://www.belkin.com)



## EuRicoh!

Business and consumer shooters, be on the lookout. Ricoh has released the **RDC 5300**, a 2.3 megapixel, USB digital camera. This unit costs \$699 and includes 8MB of onboard RAM, but you can use smart media cards of up to 64MB. It's got an internal flash, but you can also attach an external flash unit for further lighting control. The camera is equipped with a 1.8-inch color LCD panel and an optical viewfinder. It also has a 3X continuous optical zoom and a 2.5X digital zoom, and it features auto focus, auto exposure, auto flash, auto white balance control, and auto red-eye reduction, but you can also override those features for more control.



The camera's optical system provides 1792 x 1200 pixels for a high-resolution 8 x 10-inch photo prints or 896 x 600 pixels for smaller pictures. The optical zoom can provide the equivalent of wide angle, normal, and telephoto shots. A time-lapse mode lets you capture slow-motion or interval sequences. While the camera offers a USB connection, it also has a standard serial port.

Ricoh, 800-225-1899, [www.ricohcpg.com](http://www.ricohcpg.com)

## A Camera to Match

Kodak has released the **DC240i** digital camera in five iMac flavors.

These cameras feature automatic focus, exposure, and flash; a self-timer; and a USB connection. The DC240i has 3X optical and 2X digital zoom, which is equivalent to a 39 to 117 mm lens. Its 1.3-megapixel CCD sensor captures highly detailed images suitable for 5 x 7-inch prints or larger.

The DC240i, which sells for \$699, ships with an 8MB Kodak picture card, serial and USB cables, audio/video cables, four Ni-MH AA batteries, and a charger. Software includes Adobe PhotoDeluxe, Adobe PageMill, and ArcSoft Photo Printer software. Kodak, 800-235-6325, [www.kodak.com](http://www.kodak.com)

## All Together Now

You've got an iMac in the living room, your kid's Power Mac 8500/180 is upstairs, and someone's got that computer of the other platform persuasion stashed away elsewhere in the house. How can you all go online at the same time without starting World War III?

For \$70, Diamond Multimedia's **HomeFree Phoneline USB** lets you share Internet access, as well as peripherals and multi-player games between Macs and



PCs. Just plug in the USB cable, insert the CD-ROM, follow the guided setup configuration directions, and ... that's it.

HomeFree works with all USB Macs and computers running Windows 95 and 98. No, there's no extra wiring necessary; all information flows through normal phone lines, while all computers share the fastest Internet connection. In addition, all connected computers can share files and peripherals, such as printers and scanners, without interrupting phone service. And, most importantly, you can play games on two or more computers.

But what if you have a business and a home network? No problem. HomeFree includes AlterNet, a network-switching application for your portable PowerBook or iBook. With a single click, you can switch your network profile between your Ethernet network at work and your HomeFree phoneline network at home.

Diamond Multimedia, 408-325-7000, [www.diamondmm.com](http://www.diamondmm.com)



## What's in a Hub?

If your small office has lots of networked computers and peripherals, you might have a look at Farallon's new 16-port **Fast Starlet Dual Speed Hub 10/100**. This unit, designed for high-density Fast Ethernet, helps combine your older printers and computers that cannot be economically upgraded into an integrated Ethernet and Fast Ethernet environment. The hub, which costs \$249, features 16 10/100Base-TX



Ethernet ports and one crossover uplink port, support for all standard Ethernet protocols including TCP/IP and AppleTalk, at-a-glance

LEDs, free technical support, and universal power supply.

Farallon has also released an optimized 2.0 **Fast EtherTX-10/100CardBus** driver for PowerBook G3s that comes with CardBus slots. What does this do for you? The new PowerBook driver, which carries a \$180 price tag, can boost your network performance up to 69% over the previous release, letting you take full advantage of the hardware and operating system advances in the CardBus-equipped PowerBooks. It gives you the same 32-bit PCI (that's Peripheral Component Interconnect, an expansion slot) bus performance you get in your desktop Mac for transferring files over the network.

Farallon, 510-346-8001, [www.farallon.com](http://www.farallon.com)



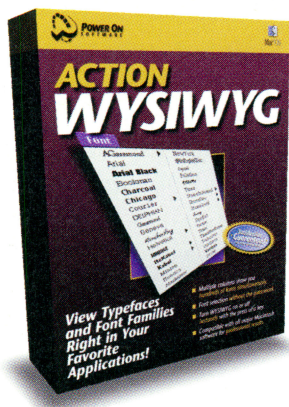
## Font of Views

If you've got a lot of fonts in your System folder, you may be asking for trouble, and Power On Software has jumped on the case with **ACTION WYSIWYG** (What You See Is What You Get). The program, a demo of which is on our CD-ROM this month, gives you a different way of viewing and using your fonts. For one thing, you can now display more fonts onscreen simultaneously and preview your document using those fonts.

ACTION WYSIWYG is compatible with major applications such as Adobe products, Quark XPress, and Microsoft Office, wherein you can view all available fonts in their actual typeface — no guesswork. The program can show you all available fonts instantly in a multi-column display: no more scrolling through hundreds of fonts.

In addition, ACTION WYSIWYG, which sells for \$30 on the Web and \$40 for the CD-ROM, lets you display only the fonts you need for specific programs and lets you group fonts by family. You can reorder font menus and assign a size and color for displaying each font, thereby making font selection even easier. To rearrange, just point and click.

Power On Software, 800-344-9160, [www.poweronsw.com](http://www.poweronsw.com)



## G4 Upgrades!

Get 'em while they're hot. XLR8 has initiated its "Fall into G4" promotion, which lets you buy its **MACH Carrier G3** "upgradable upgrade" now, while letting you upgrade again to a G4 for up to \$500 in January. The initial price of the upgrade plus the cost of a G4 upgrade in January will come out to less than the current price of a G4 upgrade alone. The promotion lasts until December 15, 1999.

This upgrade is possible because of XLR8's Carrier Upgrade Technology, wherein you can install an upgrade and then upgrade that upgrade by swapping the CPU ZIF (zero insertion force) daughtercard.

But there's more. XLR8 has also announced a price cut of up to 23% on its entire G3 product line.

Feeling kinda sluggish? XLR8 is now offering its 500MHz G3 upgrade for your pre-G3 Mac. Upgrade your older Mac for \$999 and make it zoom at 500MHz. If you already have a G3, XLR8 has an \$899 MACH G3z, which is really the daughtercard without the MACH carrier. That will also rocket your G3 Mac to 500MHz.

XLR8, 800-513-9744, [www.xlr8.com](http://www.xlr8.com)

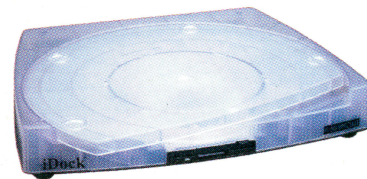


## On the iDoc of the Bay

What with all the complaints that there's not enough of this and that on the iMac, if you need extra peripherals, have a look at the **iDoc II USB** hub by CompuCable.

For \$260 you get an all-in-one, ice-colored hub and computer stand complete with a floppy disk drive, four USB ports, two Apple serial/Geo ports, and an ADB port sitting on top of a swivel-base platform that holds your iMac. (See our review on page 47.)

CompuCable, 800-344-6921, [www.compuable.com](http://www.compuable.com)





# Graphics Violence

## A Beginners Guide to Graphics Cards

**Graphics cards are scary.** They come in so many shapes and sizes that it takes a rocket scientist ... well, those NASA guys did lose the Mars probe didn't they? Let's just say it takes a lot of practice to figure out just what's going on in graphics cards. Fret not, gentle reader, we're from *MacHome*, and we're here to help!

### On the Short Bus

The world of graphics cards is shrouded in mystery and myth. Before we dive into recommendations and buying hints, we need to sort out all the details. Your Mac, no matter how old it is, has a graphics processor in it. Most of the time, these processors are located on the actual motherboard (the big green flat thing inside your computer that all the parts connect to). More recently, specifically since the release of the blue-and-white

G3s, these graphics processors have become separate entities within your computer. In a blue-and-white G3 or a G4, for example, the graphics processor comes in the form of an ATI Rage 128 card. This card can be removed from the computer and used in another machine with very little effort or tool work. This is thanks to a wonderful thing we call PCI slots.

Now bear with us – this will all come together nicely. PCI stands for Peripheral Component Interconnect. With a name like that, it had to be invented by Intel. PCI slots give your computer a way to interact quickly with third party add-on cards. PCI cards do all sorts of nifty things, from receiving FM radio to hooking your Mac into your VCR. But what we're interested in is using a PCI slot to connect a graphics card to your computer.

Normally, PCI slots run at 33MHz (yep, same measurement as the processor) and even NASA employees can see that 33MHz running into a 400MHz CPU is going to slow things to a crawl. Fortunately, all is not lost: The ATI Rage 128 in your G3 or G4 resides in a special PCI slot that runs at a more respectable

By Alex Handy



# WHAT'S THE SECRET BEHIND THIS INCREDIBLE PHOTOGRAPH?



AN EVEN MORE INCREDIBLE  
EPSON PRINTER.

Peel off ▲

To find the best all-around printer, there's no need to look all around. Here's why:

**Award-winning image quality:** Up to 1440 x 720 dots per inch for Photo Quality color and outrageous detail.

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COLOR.



Epson Stylus Color Ink Jet Printers.

**Resolution:** Up to 1440 x 720 dots per inch. **Print Technology:** Micro Piezo.™ **Print Speeds:** Up to 12 PPM black/10 PPM color with the Epson Stylus® Color 900. **Compatibility:** Windows 95, Windows 98, Windows NT 4.0x, Macintosh System 7.x and 8.x, iMac. **Interface:** Parallel, Serial, USB connectivity (some models require adaptor kit). **Software:** Complete bundle included. **Warranty:** One-year Epson® Exchange limited warranty.

**For More Information:** call 1-800-GO-EPSON or visit [www.epson.com](http://www.epson.com)

Now with \$30 mail-in rebate, Epson's line of printers starts at \$99.



66MHz. While this is still very slow, it's much better than using a regular old PCI slot.

Now here's where it gets confusing. If you bought a G4 450 or 500, your machine is a completely different bird. You'll be graced with what's known as an AGP slot. AGP stands for Accelerated Graphics Port and runs at 66MHz, the same speed as the accelerated PCI slot in the old G3s. To compensate for this, G4s use what's known as AGPx2, which runs at 132MHz — twice as fast as regular AGP. Now we're getting somewhere!

PowerBooks. Also available from ATI is the Xclaim 3D Plus, a nice little card that can send a digital signal to your TV so you can watch that Quicktime movie with the whole family.

Next, there is the newish Vision 3D Evil Eye from MacTell. This card is based on 3Dfx's popular Voodoo chipset (A fancy way of saying MacTell makes the car and 3Dfx makes the engine). This card also comes in two flavors, the 2000 and the 3500. The difference

## **Warning** this article contains graphic content.

So why are we throwing all these confusing terms around? If you're looking to buy a graphics card, the very first thing you need to know is what kind of card to get. And since cards are categorized by their type of interface (PCI or AGP), this is the first thing you need to learn in order to understand graphics cards.

So, what Macs have PCI slots, and what Macs have AGP slots? If you happen to have a really old Mac — one made before 1995 — you probably don't have any PCI slots. Instead, you have what's known as Nubus slots, which, like so many other things in the computer world, are now obsolete. Nubus graphics cards aren't made anymore, but you can still find them at used computer stores. If your PowerMac was made after 1996, chances are it has PCI slots. Almost every Mac made since then has them. In fact, the only ones that don't are laptops and iMacs. AGPx2 is only used in the G4 450 and the G4 500. While the iBook and the newly released iMacs have AGPx2 as well, neither one can use a replacement graphics card.

### **What Is All This Stuff?**

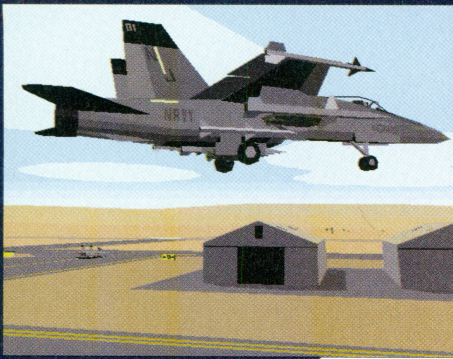
So what's out there? As we've already mentioned, ATI offers the Rage 128 series of cards in a number of interesting flavors. The two most prominent flavors are the Rage 128 Orion and the Rage 128 Nexus. The only real difference between these two cards is the amount of RAM they have; the Orion has 16MBs and the Nexus has 32MBs. While the Nexus does have some nifty bells and whistles — namely Quicktime acceleration and support for older Mac monitors — this doesn't necessitate the difference in price: You can buy a five dollar adapter for your old monitor and it will work with any graphics card. The ATI-based cards are the most common in Macs today and have the most thoroughly tested drivers. ATI supplies Apple with all of their video cards for G4s, iMacs, iBooks and

here is the speed of the graphics processor. The 3500's processor is faster than the 2000's, but the speed is almost a nonissue since the card only comes in a PCI variety. While these cards are extremely fast, PCI creates an immense bottleneck and negates most of the speed advantages the 3500 has over the 2000.

The MacTell cards get their roots from 3Dfx's Voodoo 3 cards. 3Dfx is known for making cards that only accelerate games, but the Voodoo 3 line is a jack of all trades. While it still makes your games rock, a Voodoo 3 can now rub shoulders with the best of the professional cards. Voodoo 3s come in a whole slew of varieties, but the only one that really matters to us is the Voodoo 3 2000. This card was originally Windows only, but 3Dfx recently created Macintosh software (a.k.a. drivers) for it. Thus, we poor Mac users can use these cards as well. This is not without a caveat, however: Installing the Mac drivers for an off-the-shelf Voodoo3 card can be a bit confusing. While 3Dfx has done an excellent job of streamlining and simplifying the process, it is still confusing for the inexperienced. Another problem with the Voodoo 3 is that it only supports 16-bit color in 3D mode, but more on this later.

Next we move on to another formerly Windows-only card, the Riva TNT2 from nVidia. This card is somewhat more complicated. nVidia does not actually make its own graphics cards; it only makes the graphics processors. Therefore, to get a TNT2-based card, you'll have to buy it from a third party, such as Creative Labs or Diamond Multimedia. All of these cards are basically the same, however, since they all use the same parts. The Riva TNT2 suffers from the same problem as the Voodoo3 in that its software drivers aren't included when you buy the card. You'll have to download and install them — a somewhat confusing process. But if





The top picture was taken on a computer with a standard graphics card. The bottom picture is from the same game with a 3D accelerator card installed.

you're willing to put in an hour for software installation, you'll be rewarded with what could easily be called the best graphics card on the market. A TNT2 can easily handle any game on the market and crank out Photoshop projects without breaking a sweat.

Finally we have two more cards that bring up the rear. The Formac Proformance 3 and the IXMicro Game Rocket. The Formac Proformance 3 is a relatively capable graphics card aimed more squarely at graphics professionals. It has a few bells and whistles that are only useful for people doing a lot of graphics and desktop publishing. This includes a font cache (that speeds up text on your screen) and Quicktime acceleration. One really cool feature is support for VR goggles, which Formac also sells. Also, the card does not support OpenGL (a 3D standard that is used in games; OpenGL support is a must for any serious gamer), a major shortcoming.

IXMicro's Game Rocket is a variation on 3Dfx's Banshee chipset and is slightly outdated by today's newer cards. It sup-

ports OpenGL, but only through a third-party extension, and this means it is not as reliable or fast as the rest of the cards.

Another shortcoming of the Game Rocket is that it is slightly behind the times, using a year-old chipset from 3Dfx called the Voodoo Banshee. The Game Rocket is basically a Voodoo 2 chipset with 2D support. While this may not seem significant, pause to consider the fact that there are two cards in our list based on the Voodoo 3 chipset.

## Bit Part

Does your brain hurt yet? Oh, it will soon. You know how your Monitors and Sound Control Panel lets you choose between 256 colors, thousands of colors, and sometimes even millions of colors? Well strap on your helmet; it's time for computer color class 101. As we all learned long ago, computers work with ones and zeros. Everything on your screen is simply comprised of a long string of 1s and 0s, or bits, in different combinations.

Your computer can't just process all that data at once, however. So, all those 1s and 0s are broken up into eight-digit bytes. A byte would look something like 10100110 or 00000100. With eight numbers that can be either 1s or 0s, you can have up to 256 (or 28) different combinations of 1s and 0s in any byte. That's why you can choose to set your monitor to 256 colors, also known as 8-bit color. Eventually, a single byte wasn't big enough to hold the amount of data needed to keep computers happy, so we moved on to 16 bits, which allowed for 65,536 (or 216) combinations. Thus, if you're running in 16-bit colors, you can have 65,536 different colors on the screen at once. Since the human eye can recognize something in the vicinity of 5,000,000 different colors, we're just now entering the realm of realism with 32-bit color, 64-bit color, and even 128-bit color.

So, as you can see, a graphics card that can show only 65,536 different colors in 3D mode isn't going to tickle your eyes as much as one that can display more colors than you can comprehend. So, the ATI

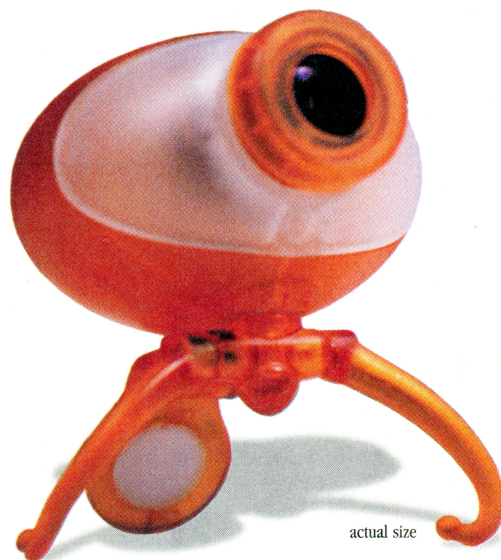
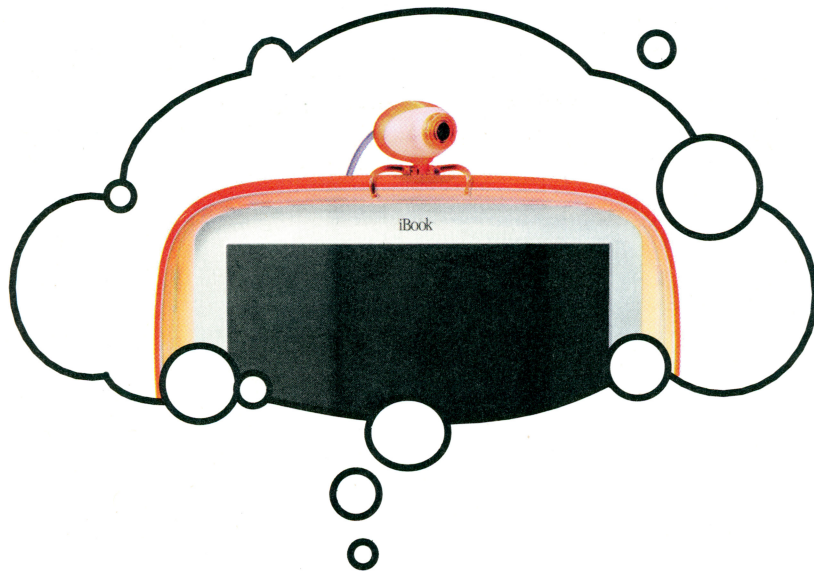
Rage 128 is much more effective, and will remain more effective, at producing great images than the Voodoo 3 since it can run in 32-bit mode at all times.

Of course, bit depth ain't all that matters. Video cards also have RAM, and RAM is another major consideration. When working in 2D, a graphics card won't use much RAM. At most, it'll need around 8MBs, but that's at the very high end. With today's high-speed games and advanced 3D applications, however, graphics cards need a lot more memory. But why, you may be asking, do I need more RAM on my graphics card than I had in my first computer? In a word, polygons.

3D models are made up of polygons — just like the ones you learned about in geometry class. A hallway would be made up of long rectangular polygons to represent the walls and ceiling, while a doorway would require some smaller ones to create the frame, the molding, and the door itself. Each polygon, be it three sided or 20 sided, has its own color or picture, called a texture. In a game such as *Quake*, for example, the walls of a hallway might be covered in moss, so each of the rectangular polygons that make up the hallway would be covered in a mossy green texture. Of course, since these textures can be comprised of high-quality images, they can be quite large. And if you're playing *Unreal*, or working in a high-level CAD program, you may need to use thousands of different textures. Each of these textures lives in video RAM, or VRAM for short. VRAM is what's included with your graphics card, and the standard size for today is hovering around 16MBs. The more RAM you have on a graphics card, the more textures it can hold, and the more interesting a 3D environment can be.

Today's major 3D games run at 16-bit color depth, as we've so energetically stated. Here's an easy trick: If you're running 3D applications in 16-bit colors, you'll only need around 16MB of RAM. Later, when games take the step up to 32-bit color (as they will be in about four months), you might need to upgrade to 32MBs. So, if you're lusting over that Riva TNT Ultra 2 with 32MB of RAM, just keep in mind that you probably won't





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be using all that memory for awhile. And by the time you do need it, the rest of the industry could easily have moved on to the next big thing, making your card obsolete despite all that extra RAM.

One final thing to take into consideration is the resolutions a graphics card will support. This is a double-edged sword and a bit complicated to explain.

Basically, your average 15-inch monitor used to run at a resolution of 640 x 480. This means that the monitor would show 640 pixels horizontally on the screen and 480 pixels vertically on the screen. When you multiply 640 and 480, you get 307,200, which is the number of pixels shown on the entire screen. (This isn't

really important; we just like to show off our math skills.) Nowadays, monitors can display information at all sorts of funky resolutions, from 640 x 480 all the way up to 1,920 x 1,200. While some graphics cards say they can run at higher resolutions, you'd be hard pressed to find a monitor that can handle it.

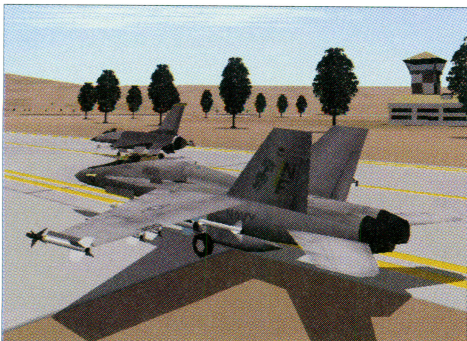
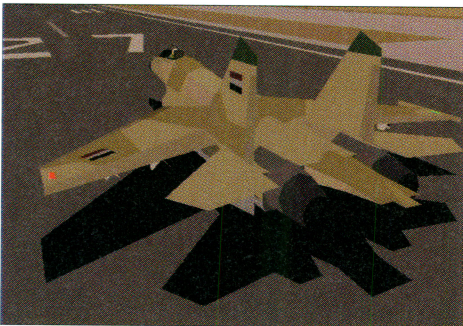
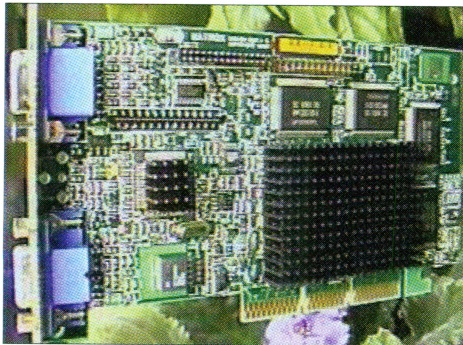
So what resolution do you need? If you have a 15-inch monitor (and your eyes aren't what they used to be) you can run comfortably at around 800 x 600. My own 21-inch monitor at work runs at 1,360 x 1,024, which is seriously pushing the limits of legibility. All of the cards mentioned in this article can handle 800 x 600 with ease, and only the Game Rocket should have trouble running at the maximum comfortable level for your monitor. One side note: You must have a multisync monitor in order to change the resolution of your screen. Check with the manufacturer to find out if you have one.

### Choose or Lose

Now that you have all sorts of new things to worry about when choosing a graphics card, it's time to make some recommendations. If you're only looking to increase the number of colors you can display at one time and perhaps increase your screen's resolution (the size of your desktop), your best bet is the Formac Proformance 3. It's tripped out with a laundry list of features for the graphics professional, and it doesn't go overboard with more power than you'll ever need. Keep in mind that if you are going to use a PCI graphics card, there's a glass ceiling on performance. If you're a hard-core gamer looking to make your games fly off your monitor, you'd be best suited for either of the Windows cards: the Voodoo 3 2000 or the Riva TNT2. Of course at press time, the TNT2's Mac drivers weren't finished, but we'll let you know as soon as they're done. The TNT2 is a phenomenal card — a good choice for any user who needs pure, unadulterated horsepower for their graphics. But the

Voodoo 3 isn't any slouch. It's possibly the fastest of the graphics cards listed here, and it can hold its own in most applications and games. And since both cards can handle OpenGL, any gamer would be remiss not to check them out. If you have a G4, get an AGP version of these cards; the extra bus speed will really help. The Voodoo 3-based MacTell Evil Eye cards weren't shipping at press time, but give them a look when they're released.

If it's stability and Mac friendliness you want, ATI's Orion and Nexus cards are great. While the Nexus has a bit more RAM than you'll probably need, the Orion is a well-rounded card that can handle graphic arts or graphic violence without batting an eye. While the ATI doesn't do anything better than its competitors, it doesn't do anything worse either. It's a smart choice for the gamer and professional alike. **MI**



**Graphics cards** are becoming massively complex little pieces of hardware. The card shown above has the power to transform a simple rendering of a plane into a realistic deadly bomb-dropping machine.

## It's in the Cards

### ATI

905-882-2600  
www.ati.com  
Orion 128: 16 MB, \$179  
Nexus 128: 32 MB, \$269  
Xclaim 3D Plus: \$149

### Nvidia

408-615-2500  
www.nvidia.com  
Not available at press time;  
Check with company

### IXMicro

888-467-8282  
www.ixmicro.com  
Game Rocket: 16 MB, \$249

### Formac

925-251-0100  
www.formac.com  
Proformance 3: 8MB, \$199  
16 MB, \$279

### 3Dfx

888-367-3339  
www.3dfx.com  
Voodoo 3 2000 PCI: 16 MB, \$99

### Mactell

888-622-8355  
www.mactell.com  
Vision 3D Evil Eye 2000:  
16 MB, \$179  
Vision 3D Evil Eye 3500:  
16 MB, \$249



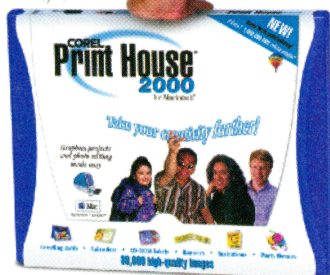
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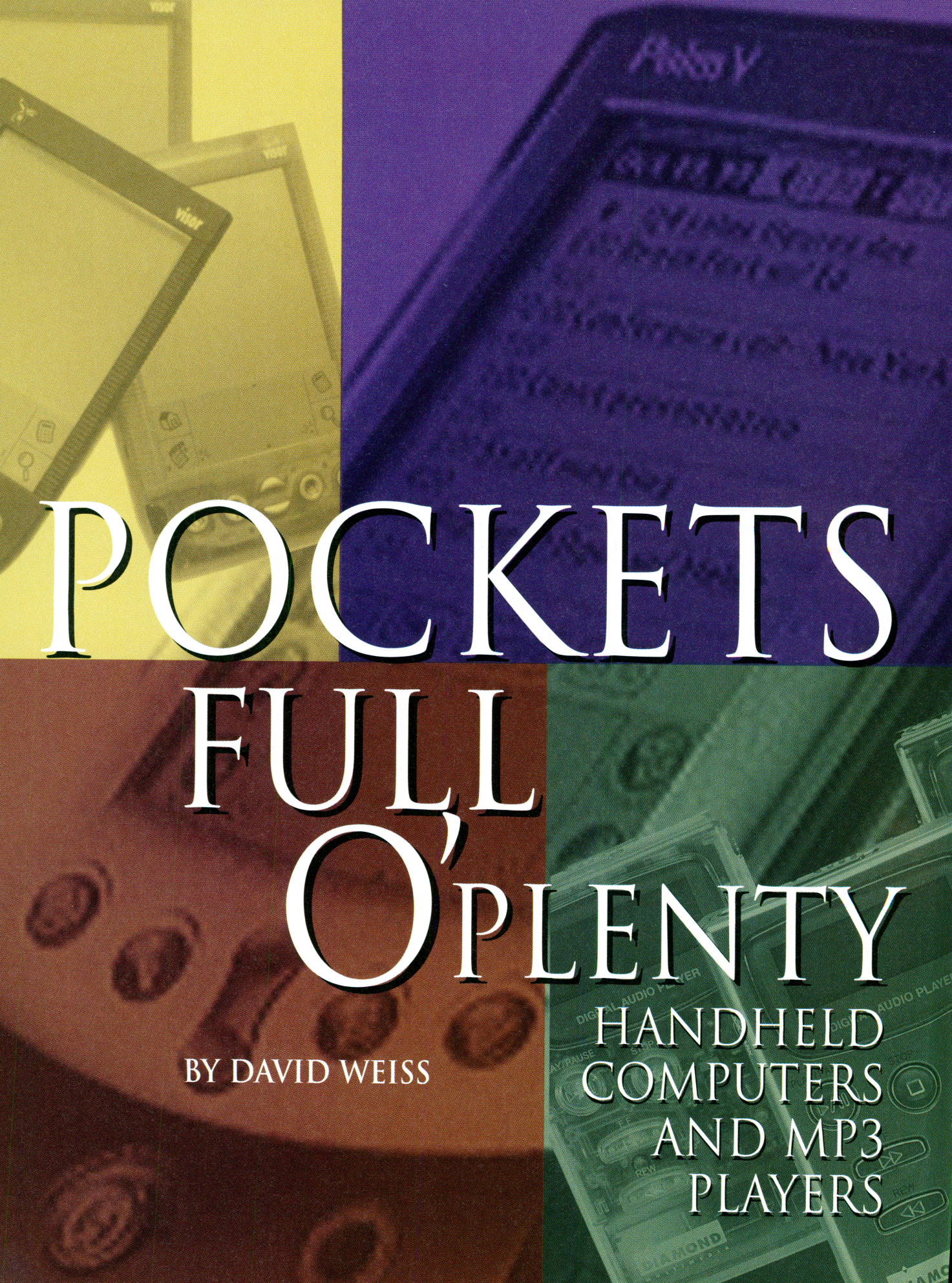


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# POCKETS FULL O'PLENTY

BY DAVID WEISS

HANDHELD  
COMPUTERS  
AND MP3  
PLAYERS





They say **good things** come in **small packages**. And that's especially true when it comes to **electronic gadgets**. The smaller they are, the more mobile they are, and the **easier they are** to integrate into our lives. Also, they make **ultra-cool stocking stuffers** for that special someone. Here, *MacHome* looks at **hand-held computers** and the **newest portable MP3 player** for the Mac, the **Rio 500**.

## THE PALMTOPS

Ever since Palm Computing revamped its Mac desktop software, there's been a lot of hubbub in the Mac community about Palm Connected Organizers — handheld computers that connect to your Mac via a cradle. Palm Organizers make fine companions for Macs. The Palm Operating System, which relies on simple icons that you manipulate with a stylus, has a lot in common with the Mac's Operating System. And there's no end of applications, games, and utilities you can run on a Palm, as a glance at the Palm Resources Web page will show you ([www.palm.com/resources](http://www.palm.com/resources)). Some applications have a Mac component, and you share information between your Palm and your Mac via software called Conduits, which is easy to install. Other applications, including most of the games, run only on the Palm, but you can download them from the Net and install them onto your Palm.

Recently, Palm Computing started licensing its software to third-party hardware manufacturers, and now, in addition to Palm's own hand-held computers, we have the Visor, produced by Handspring. Aware of the growing popularity of the Palm platform, Apple plans to ship Palm Desktop software on the Mac OS 9 disk. In fact, even as we speak, iBooks are shipping with Palm Desktop software.

Palm computers are differentiated primarily by RAM. Rather than allowing your computer to process more information simultaneously, as is the case with your Mac, in the case of the Palms, RAM actually works as storage space. This makes for a very smooth experience — with no hard disk to churn away whenever you have to save something, the information you put in is always “there.” You don't have to “open” files, or “quit” a program; you just move from file to file, program to program. And a little RAM can store a lot of information. For example, 1MB can



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store about 4,000 contacts, 2,400 appointments, 750 to-do items, and 100 emails. Pocket Quicken (see this month's Home Office), a highly capable pocket-sized version of Intuit's venerable personal finance software, takes up a mere 75 kilobytes.

Because most of your Palm OS data takes up such a tiny amount of space, it's a snap (and lots of fun at parties), to "beam" information from one handheld to another via infrared — both Palms and Visors have infrared ports.

## HUMBLE PALMS

On the low end of the cost spectrum, we find the Palm IIIe and the Visor, both of which cost \$179. Handspring offers a Visor Solo for \$159, but it doesn't come with a cradle for connecting to your Mac. This is actually not such a bad marketing idea — you might be interested in a Visor Solo if you don't intend to use it with your computer. More importantly, if two partners from a one-computer household want to buy Visors, there's no need to buy two cradles, and they can save \$20. Still, at \$179, the Visor comes out less expensive, depending on which kind of Mac you have: That's because for serial Macs, the Palms require the additional purchase of a \$15 cable, and for USB Macs, the required cable costs \$40 extra. The Visors are native USB right out of the box, but they don't offer a serial version, so if you have an older, pre-USB Mac, your choice is obvious.

The Palm IIIe has the "classic" Palm form: It's about the size of a wallet, it's got a rounded back, and it has a cover that you can snap open with one hand while you pull out the stylus with the other. This is a brilliant design, because you can pull it out of your pocket and jot down a note, look up a phone number, or beam someone a game, almost without even thinking about it. Similarly, it has a cradle that you can drop the Palm into with unconscious ease.

It's a good screen, which is clearly visi-



ble in the daytime, and if you press and hold the On button, you'll get reverse backlighting, which is perfect for night use. With a dial, you can adjust the screen's contrast.

It has 2MB of RAM, and it's not upgradeable, but unless you try to load up your Palm with books (yes, you can read books on your Palm), or fill it with FBI-sized databases, you'll be hard pressed to fill 2MB, believe me. The regular version has a gray, textured finish that works for me, but if you're feeling the need to pack something a little more translucent, the Palm IIIe Special Edition has an ice-colored see-through case and you can adorn it with different-colored flip covers. You can add these flip covers to the gray version, too, if you like. The IIIe ships with a lightweight, plastic stylus, but if you want something heavier, you can buy one for a few bucks.

The IIIe runs on two triple-A batteries, which last about three weeks with heavy usage. They'll go even sooner if you use the backlighting a lot. But a \$20 battery charger with two sets of rechargeable Alkalines makes a fine solution — it'll pay for itself in a few months, and have a much lighter impact on our beleaguered environment.

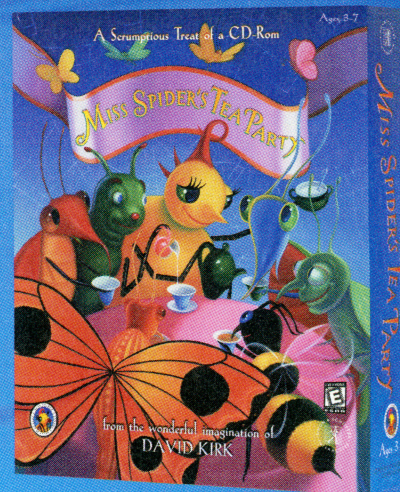
For \$129, you can purchase a modem for your IIIe, with which you can receive and send e-mail, and even cruise the Web. Be warned, though; cruising the Web on a Palm is a rather primitive experience.

Like the Palm IIIe, the Visor also has 2MB of RAM, and it also runs on two triple-A batteries. One minor difference is that you adjust the screen contrast not with a dial, but with a slider control on the screen.

The Visor is a bit taller, a bit thicker, and boxier, so I found it a tad less hand-friendly than the Palm. And in marked contrast with the Palm IIIe's flip cover, the Visor's cover is a clip-on. So when you use it, you need to take off the cover, and put it somewhere — the nearest

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desk, under your arm, between your teeth — which is a less-than-optimal scenario, especially if you're on the move. Also, the infrared port faces off to the side rather than straight ahead, as it does on the Palms. This means that when you're beaming somebody a game — er, I mean, when you're beaming a prospective client your contact information, you have to turn to the side, rather than face the other person straight on, which is also a bit of an awkward setup. I also found the Visor's cradle somewhat clunky. Rather than slipping the handheld into the cradle, you have to snap it in, and so you can't remove it with one hand, which you can do with the Palm.

But despite the awkwardnesses I mentioned, the Visors have one thing that the Palms don't: the Springboard slot, a hardware interface that lets you plug in more RAM, or — and this is the exciting part — Springboard peripherals. These could include GPS devices, so you can pinpoint where you are in the world and plot your return via a map program; MP3 players; modems; and phones. Check the Handspring Website for the latest developments in Springboard modules.

## NOT-SO-HUMBLE PALMS

Moving up the price ladder a little bit, we find the \$249 Visor Deluxe and the \$299 Palm IIIx.

The Visor Deluxe is identical to the Visor, except that it packs a mighty 8MB of RAM, comes with a leatherette carrying case, and also comes in a variety of Mac-friendly colors: graphite (but it's actually just black), ice, blue, green, and orange.

The Palm IIIx is identical to the IIIe, except that it sports a sturdy, metal-and-plastic stylus, it comes with 4MB of RAM, and it is upgradeable. If you take off the back, you can add RAM or peripherals, as with the Visor's

Springboard slot, but it's not as easy because you have to use a screwdriver; installing a Springboard module is like slipping a disk into a drive.

## PALMS IN THE UPPER REACHES

Moving up in the world of Palms, we find the \$369 Palm V, which has only 2MB of RAM, and, unlike the Palm IIIx, it's not upgradeable. So why is it so expensive? The Palm V has a radically different design from the Palm III series, and the net effect is that it's smaller, thinner, and lighter, while providing the same-sized screen. Also, get this — Palm Vs come with rechargeable batteries that charge up when the Palm is in the cradle. After an initial charge of three hours, all it takes is a couple of seconds and it's done. You probably won't even notice it's been recharged.

Rather than the standard flip cover, the Palm V has a side-folding "book" cover, made of nice-quality leather. It's also ambidextrous — you can put either the stylus or the cover hinge on either side.

As with the Palm III series, the Palm V comes with a jazzy, easy-to-use cradle, and for an extra investment, you can purchase a Palm V modem. You can't share the same cradle, modem, and other peripherals between Palm III and Palm Vs. Like the Visor, it has an on-screen contrast control.

The \$449 Palm Vx is identical to the V, except that it comes with 8MB of RAM.

The \$499 Palm VII is wireless. Similar to the IIIe in RAM, form, and lack of upgradeability, the Palm VII sports a radio transmitter that allows you to send and receive email and access online services from anywhere. This is a great gadget, but it requires a monthly service charge. We reviewed it in the August 1999 *MacHome*. To read the complete review, go to [www.machome.com](http://www.machome.com), click on Product Reviews, then under Hardware, click PDA (for Personal Digital Assistants).





## Handheld Computers

Company	Price	Thumbs Up	Thumbs Down	Rating
Palm Vx Palm Computing 408-326-5000 www.palm.com	\$449	Lightweight, recharges in the cradle, has lots of RAM, ambidextrous leather cover	Extra cables required (\$40, USB, \$15, serial), not upgradeable	★★★★
Palm V Palm Computing 408-326-5000 www.palm.com	\$369	Lightweight, recharges in the cradle, ambidextrous leather cover	Extra cables required (\$40, USB, \$15, serial), not upgradeable	★★★★½
Palm VII, Palm Computing 408-326-5000 www.palm.com Plus monthly fees	\$499	Wireless access to information, not much larger than a regular Palm, hand-friendly flip-top cover	Needs a dedicated email address, to surf the Web, less RAM, less expandable than the IIIx, Extra cables required (\$40, USB, \$15, serial)	★★★
Palm IIIe, Palm Computing 408-326-5000 www.palm.com	\$179	Inexpensive, hand-friendly flip-top cover	Extra cables required (\$40, USB, \$15, serial), lightweight stylus, not upgradeable	★★★★
Palm IIIx, Palm Computing 408-326-5000 www.palm.com	\$299	Upgradeable, hand-friendly flip-top cover, can add peripherals	Adding peripherals is a bit unwieldy, Extra cables required (\$40, USB, \$15, serial)	★★★★½
Visor, Handspring 888-565-9393 www.handspring.com	\$179	Comes with peripherals port, USB native	Clunky cover, lightweight stylus, IR port points to the side, no serial version	★★★★
Visor Deluxe, Handspring 888-565-9393 www.handspring.com	\$249	Comes with peripherals port, lots of RAM, comes in colors, USB native, comes with case	Clunky cover, lightweight stylus, IR port points to the side, no serial version	★★★★

## Portable MP3 Player

Rio 500, Diamond Multimedia 800-727-8772 www.diamondmm.com USB Required	\$269	Small, lightweight, sturdy, excellent controls, 64MB of on-board memory plus open SmartMedia slot, great sound, easy connectivity through USB, nice carrying case	Expensive; lousy headphones	★★★★½
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## THE RIO 500 MP3 PLAYER

What discussion of pocket-sized electronics would be complete without the Rio 500, the first Mac-compatible USB MP3 player? Not this one. MP3 players will soon be all the rage.

MP3 is an audio file format that keeps the file size down and the sound quality high. So you can easily download high-quality songs from the Internet, copy them to your MP3 player, and walk around cranking the tunes.

And best of all, unlike CD players, MP3 players are shake-proof — you could theoretically have a listen while riding a horse.

The Rio 500 is small and sleek — even smaller than a Palm V. But don't let the size fool you; it can store 64MB of MP3s in its on-board memory, which is about a CD-and-a-half's worth of music. Plus it's got a SmartMedia drive, so for an extra \$100, you can pack an additional 64MB.

The device, which comes in blue, silver and purple, sports a nice display that can show you not only the track number and the title of the track, but also the folder in which you'd like to store it. That way, depending on your mood, you can play the "classical" folder, the "Comedy" folder, the "Thrash metal" folder, or whatever you'd like.

You navigate through these folders by means of a dial that also acts as a clicker — it's a brilliant interface feature that's gradually coming into use by digital cameras, mice, and the like.

The sound is spectacular, too — you'll hardly be able to tell the difference between it and a CD. And the connection to your Mac is made seamlessly by good file-transfer software and a solid USB connection. Just plug it in, call up



the software, and drag files over to it. Presto! The Rio 500 transfers 1MB before you can count to 10.

The only less-than-stellar aspect of the Rio 500 is

the set of headphones that come with it. They're not particularly responsive, and they're the kind

you have to plug into your ears. When someone asks you a question — and you know this is bound to happen, no matter how violently you're shaking your head and playing air guitar — you can't just pop them off. Instead, you have to gently remove each one, and then you've got to wrap them around your head or stuff them into a pocket.

Also, at \$269, the Rio 500 is a tad expensive. But considering the quality — and the fact that a Walkman will run you about \$100, I think it's obvious these babies are worth the extra cash. **MH**



# Better to Give than to Receive?

## You Be The Judge

MacHome's Vaunted Annual Holiday Gift Guide

**"A *ceramic snowman*? What the &@\*%#!@! kind of gift is **THIS**?"**

If you're hoping to avoid that sort of talk during the holiday season, this article is for you. Yeah, yeah, yeah, it's the thought that counts, sure. But being that they're Mac users, your people are special, so check out our recommendations for gifts great and small. If you don't want to, fine, but be prepared for pointed remarks around the dinner table.

Walk with us now through a winter wonderland, as the editors of MacHome Journal cull their respective wisdom to bring you our picks for the best holiday gifts. Along the way you'll hear from such MacHome luminaries as News Editor Jackie Dove, Reviews Editor David Weiss, enigmatic Editor John Poultney, gaming whiz and Associate Editor Alex Handy, and our newest star, Associate Editor Molly Wood.

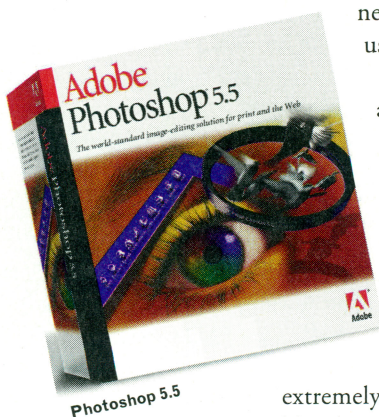
**O'er the hills we go!**



# For the Artiste

**Jackie says:** If you have ever used or wanted to learn Photoshop, or if you're creating images for the Web, version 5.5 will come in handy. Photoshop's new "Save for Web" feature has quickly become an intrinsic part of the workflow for most artists who design for the Web. A red flag though: This program is not an "easy-to-use," nor is it all that cheap, but once you learn some of its conventions, many things operate according to an internal logic that is not too hard to grasp. And the results are delicious.

Everyone's scanning their brains out these days, what with the new crop of lightweight, scanners on the market. But sometimes it's a challenge to make your pictures look exciting. One way to dance up your photos is to put a frame around them. Photo/Graphic Edges 4.0 gives you literally thousands of frames to choose from. Plus, you can incorporate scads of effects like sepia tones, grains, shadows, distortions, you name it. You don't need any artistic talent, just use a frame.



A little type never hurt anyone. More type is even better. Every think of giving a loved one a brand new font? Well, probably not yet, but consider. The P22 Font Foundry has an exquisite type library of artists handwriting and sketches for the

extremely reasonable price of \$24 or so. Get inspired by the actual handwriting of artists such as Claude Monet, or Edward Hopper or Maxfield Parrish and many, more. These fonts also come with a set of cute little hand-drawn pictures.

*Adobe Photoshop 5.5*, Adobe, \$609, 800-833-6687, [www.adobe.com](http://www.adobe.com)  
*Photo/Graphic Edges 4.0*, \$149,  
*Auto/FX*, 205-980-0056, [www.autofx.com](http://www.autofx.com)  
*All Kinds of Fonts*, \$24, *P22 Type Foundry*  
 800-722-5080, [www.P22.com](http://www.P22.com)

**David says:** If your giftee's Mac lacks external speakers, and his or her artistic passion lies in the musically inclined, why not wrap up the Apolla Speakers from Pele Enterprises? These \$40 speakers pack an impressive punch for the money.

For the budding artiste, nothing will fit the bill like a pen tablet, which gives you the ability to spread electric ink or digital paint with reckless, yet tasteful, abandon. At \$199, Wacom's Graphire pad comes with a mouse as well, and it's got a finger wheel for easily scrolling through any window.

A copy of MetaCreations' Painter 6 will surely float someone's boat. Though it's not cheap at \$399, this program provides amazing creative potential for someone who needs only that magical outlet to paint with startlingly realistic textures and even photographic images. And although it's best used with a pen tablet, folks with only a mouse can get a lot of artistic expression with Painter as well.

*Apolla speakers*, \$40, *Pele Enterprises*, 804-340-0820, [www.pelezone.com](http://www.pelezone.com).

*Graphire tablet*, \$199, *Wacom Technologies*, 360-896-9833, [www.wacom.com](http://www.wacom.com).

*Painter 6*, \$399, *MetaCreations*, 805-566-6200, [www.metacreations.com](http://www.metacreations.com).



**Alex says:** Got a friend who needs to brush up on his music skills? Has your spouse not seen a sheet of music since her piano lessons 16 years ago? Grab harmonic Visions' Music Ace 2 and they'll be back on the bandwagon (Ha! Get it? BANDwagon?) in no time. This is one gift that works well with an overall musically themed Christmas, as it's compatible with MIDI keyboards.

Bryce 4, from MetaCreations, is awesome. You can do a world of things with this 3D rendering program, not the least of which is creating your own worlds. Originally designed for creating foreign landscapes, Bryce has matured into the thinking-person's 3D modeler. This is a gift that will open your eyes and make you sweat with the raw power you hold in your hands. You can do anything with Bryce 4.

*Music Ace 2*, \$50, *Harmonic Vision*, 800-644-4994, [www.harmonicvision.com](http://www.harmonicvision.com)

*Bryce 4*, \$250, *MetaCreations*, 800-472-9025, [www.metacreations.com](http://www.metacreations.com)

**John says:** Despite the inherent risk of terrifying cuts, paper remains a family favorite for crafts of all types. Origami, papier maché, paper airplanes, what-have-you — they're all possible with paper. But with PaperStudio, you can do much more — anything from greeting cards, business cards, to little pyramids and so forth. You create the designs using downloadable templates from PaperStudio's Website, then order heavy matte-coated paper (at a nominal price) to complete them in a professional manner. You can check out some PaperStudio projects if you have Microsoft's Word 98 Personal Edition for the iMac (\$99, from Microsoft), as it's



## For the Artist (Continued)

bundled with this software.

There's also Print Explosion, from Nova Development. It's a \$50 package that includes something in the neighborhood of 50,000 graphics and 4,000 design templates for various print projects. And for \$30, check out Staz Software's Redneck Publisher, a fantastic and very funny desktop-publishing program that also includes card templates, but with an hilarious (if borderline offensive) "redneck" theme.

And if your creative type is a musician, you could do worse than Musitek's

SmartScore, a \$399 program that lets you scan scores and turn them into MIDI files. There's also a \$149 version just for piano scores.

But let's not forget video! Avid \$240 Cinema is a nice choice for the budding videographer in your life, as it lets you construct movies using simple templates for common occurrences like birthday parties and soccer games.

And lo! Like a bright star in the East comes a new graphics tablet — perhaps a worthy competitor to Wacom's empire, even. It's the e-Pad, from MG Logic. Just \$90 and it comes in all iMac colors.

*PaperStudio*, prices vary, 847-718-0075, [www.paperstudio.com](http://www.paperstudio.com)

*Print Explosion*, \$50, Nova Development, 800-395-6682, [www.novadevelopment.com](http://www.novadevelopment.com)

*Redneck Publisher*, \$30, Staz Software, 228-255-7085, [www.stazsoftware.com](http://www.stazsoftware.com)

*SmartScore*, \$399 (\$149 for piano voices only), Musitek, 805-646-8051, [www.musitek.com](http://www.musitek.com)

*Avid Cinema*, \$240, Avid,

800-949-2843, [www.avid.com](http://www.avid.com)

*e-Pad*, \$90, MG Logic, [www.mglogic.com](http://www.mglogic.com)

## Goin' Mobile

If they're on the go, and they don't yet have one, then they need a Palm and that's all there is to it. 3Com's Palm IIIe is a \$179 handheld computer that synchs up to your Mac via a serial cradle. 3Com also offers a \$40 USB converter kit.

*Palm Computing*, 800-576-6003, [www.palm.com](http://www.palm.com).



Visor

Handspring offers the Visor, a handheld computer that also runs the Palm Operating system. Visors come in five iMac colors, they're native USB, and they also start at \$179 with the cradle. *Handspring*, 888-565-9393, [www.handspring.com](http://www.handspring.com).



Rio 500

As long as they're going mobile, they might as well go Amobile with *tunes*. And there's no better mobile device for this purpose than Diamond Multimedia's Rio 500 Mp3 player. This tiny-but-powerful gizmo, though it's a tad on the pricey side at \$269, just flat-out rocks. With 64MB of on-board memory and a slot to add as much as you can fit on a SmartMedia card (about 64MB is the upper limit), controls that are blissfully easy to use, and easy connectivity to your USB-enabled Mac, the Rio 500 is the best way to carry around CD-quality Mp3s with you wherever you go.

*Diamond Multimedia*, 800-468-5846, [www.diamondmm.com](http://www.diamondmm.com).

## For the Vidiot



Elura

A video camera can change world history. Just ask the Aguy who videotaped the Rodney King incident. But heck, we don't mean to spoil the holiday spirit with such depressing topics — just think, with a video camera, you can tape your neighbor falling off the roof while clearing leaves out of the gutter, and send it in to *America's Funniest Home Videos*. Now *that's* comedy, and heck, you could win \$5,000 — and that will more than pay for the camera!

But why spend that much when you can get the excellent Canon Elura for just about \$1,300? This camera uses the DV (digital video) format, allowing you unprecedented control over your footage and seamless integration with those new iMac DVs. It also works as a still camera, if you like that sort of thing. The perfect accessory for that lucky iMac DV owner!

*Canon USA*, 800-463-7766, [www.usa.canon.com](http://www.usa.canon.com)

Another excellent video stocking stuffer is XLR8's fantastic Interview. This snaky little \$99 doodad hooks into a USB port at one end, and an S-video or standard composite video source (like a regular camcorder or VCR) at the other. It provides excellent video-capture functions and it includes Strata's outstanding VideoShop video-editing software. If you think this is a lot of superlatives for one product, you're right — but we like this product well enough to have named it Product Of The Year 1999.

*XLR8*, 888-957-8867, [www.xlr8.com](http://www.xlr8.com)





# Internet Delights

**David Says:** How about a shiny new CD of Mac OS 9? For \$99, you can endow your giftee's Mac with Sherlock II, a boon for anyone who needs to find stuff online, fast. It's billed as "The Internet OS."

Actually, what your giftee really needs is a Frisbee. How long has it been since he or she has been outside? Wham-O Frisbees come in abundant styles, and most will cost less than \$20.

Of course, if that special someone plans on making extensive use of Microsoft's Internet Explorer or Netscape's Communicator, then you can likely win unconditional love if you express your feelings in good, tangible, random-access memory. Stop by Newer RAM's Website

([www.newerram.com](http://www.newerram.com)) for a guide to RAM upgrades.

Mac OS 9, \$99, Apple Computer, 800-767-2775, [www.apple.com](http://www.apple.com).

Frisbees, less than \$20, Wham-O, 888-442-6601, [www.wham-o.com](http://www.wham-o.com).



**Jackie Says:** For those who want to design a Website, but don't want to be bothered with learning HTML, GoLive 4 makes short work of visual Website design. GoLive is not billed as an "easy-to-use" application, but you can start off simple and get more sophisticated as the spirit moves you.

If all you want to do is create some simple JavaScript rollovers and image maps for your Website, Adobe ImageStyler lets you accomplish these task with relative ease. A surprisingly powerful and easy to learn program, ImageStyler actually lets you do a Web page layout and generates your HTML and JavaScript code for you.

Adobe ImageStyler, \$144, Adobe GoLive 4, \$299,

Adobe, 800-833-6687, [www.adobe.com](http://www.adobe.com)

**John Says:** The problem with habitual Net surfers is that they get in ruts, always looking at the same few Web pages. They need suggestions, and what better way than with Workman Publishing's \$10 Page-A-Day calendar, a decidedly low-tech (paper) calendar that sits on your desk. It's one of those tear-off the page designs, and every day has an interesting new Web destination. Since 2000 is a leap year, there's even a page for February 29th.

Page-A-Day Internet Calendar, \$10, Workman Publishing,

212-254-5900, [www.workmanweb.com](http://www.workmanweb.com)

**Molly Says:** Trying to call home for the holidays? Is your mom online roughly 10 hours a day since she discovered AOL Instant Messaging? Consider springing for DSL, or a digital subscriber line. It's a bit pricey, but this technology brings the Internet home 24-7. And it's blazing fast. If you've got access (and some areas don't), do it! Call an authorized local provider, most likely your local telephone service provider, to see if you can get it. Service ranges from \$99 to \$150 per month (ow). Plus installation (ow!).

They say nine out of 10 iMac owners are on the Internet. If you've so far confined your Net life to work, where there's a nice, easy LAN all set up, and the wires carome off and disappear tidily into the wall, the iMac is the easiest way to make the transition to Web-at-home life. Take it out of the box, plug it in. You're surfing in minutes. Now in three fabulous new models.

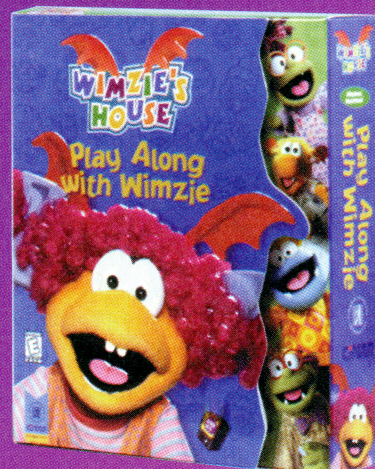
iMac, \$999 — \$1499, Apple Computer, 800-767-2775, [www.apple.com](http://www.apple.com)

## Make a PC Play-Date with Wimzie

Wimzie's House™  
is the home of the  
happiest daycare.

Join Wimzie, her family  
and friends  
in hours of games, activi-  
ties and adventure.

In Wimzie's daycare  
the fun and learning  
never ends.



Ages 2 to 5

Emphasizes pro-social themes  
focusing on such issues as friend-  
ship, generosity, loneliness, jeal-  
ousy and diversity

**A Funtastic  
new CD-ROM  
based on the  
hit PBS Show  
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Brought to you by  
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Turn on your

# Mac

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## Really Geeky Items

**John Says:** What's really on a geek's mind? It's what's under the hood. And one of the best ways to peek under the hood of a Mac (without having to take your computer apart, that is) is with Micromat's TechTool Pro. This \$99 package digs deep, and in seconds you'll know the skinny on your system's innards. And it will correct most problems it finds. It's like storing a technician in a little tiny box, without all the feeding and labor costs and cleanup hassles.

And no geek's life will be truly complete without a personal copy of REAL Software's miraculous REALbasic. This package is the key to starting with programming on Macintosh. We gave this \$149 package a 5-Apple review last year, and we meant it. Though it's not the simplest package, it lets you construct real, working Mac software, not just prototypes, and saves you from much of the tedium of coding. Some coding and logic is required, but isn't that what being a geek is all about?

*TechTool Pro*, \$99, *MicroMat*, 800-829-6227,

[www.micromat.com](http://www.micromat.com)

*REALbasic*, \$149, *REAL Software*, 512-263-1441,

[www.realbasic.com](http://www.realbasic.com)



REALbasic

**David says:** A "fun-sized" USB Hub from Aten makes a nice, gift for the geeky — it's colorful, functional, and best of all, fun-sized. With a USB Hub, your giftee will be better able to connect to all the more expensive gifts she may or may not receive this holiday season — printers, cameras, scanners, you name it.

If your giftee has a G3 or G4 tower, and he doesn't have an internal modem, why not get him a Stealth Serial Port from Gee Three? This sneaky little \$50 number slips into your modem port, but gives you a serial port with which you can easily connect to older cameras, printers, PDAs and MIDI devices. Or, for only \$20, Gee Three's ThreePort makes an exceedingly fine gift for the über-geeky: It splits your serial port into three, and you can choose between them by flipping a switch.

*"Fun-sized" USB hub*, \$69, *Aten*,

888-999-2836, [www.aten-usa.com](http://www.aten-usa.com).

*Stealth Serial Port*, \$50, *ThreePort*, \$20, *Gee Three*,

650-328-8091, [www.geethree.com](http://www.geethree.com)

**Molly Says:** For the totally tactile, the typing-impaired, the



handicapped or the just-learning-to-read, the Troll Touch is brilliant! It's a touch-screen system for the iMac. You just drape it over the monitor, plug it into the USB port, and you can do anything you'd do with the mouse by just touching the screen! It's \$595, but it's a huge boon for all you solitaire players and the geek-factor is huge. *Troll Touch*, \$595, *TrollTouch*, 805-257-1160, [www.trolltouch.com](http://www.trolltouch.com)

**Alex says:** Know any skiing geeks? You've heard them around the water cooler, describing things no one else could possibly understand in bizarre ski-talk. For those people on your list who love strapping melted-down bowling balls to their feet and hurtling down a mountain at 200 m.p.h., get Cylogic's \$20 Ski Area Screen Saver. This puppy will show you ski resort maps and tell you current snow conditions at over 70 resorts in America and in Europe. And you can even listen to live Real Audio broadcasts of all sorts of skiing news. *Ski Area Screen Saver*, \$20, *Cylogic*, [www.cylogic.com](http://www.cylogic.com), 800-295-6442

## Harmless Diversions for the Very Young

**David says:** The Pablo board from KB Gear is a wonderful diversion. It's a kid-friendly pen tablet that costs \$99, and it's relatively harmless. It does, however, include Kai's Power Goo, so if your kid gets ahold of your photo, you just might have to suffer seeing yourself, uh ... goosed. It uses ADB, so if you've got an iMac, you'll need to purchase Griffin Technologies' \$40 iMate ([www.griffintechology.com](http://www.griffintechology.com)). But KB Gear is just rolling in Harmless Diversions for the Very Young—the company also offers the JamCam, a \$90 USB camera for the wee'un in all of us. *Pablo Board*, \$99, *KB Gear Interactive*, 800-926-3066, [www.kbgear.com](http://www.kbgear.com).

**John Says:** It's never too early to introduce young people to the wonder of tattoos. And Mattel Media is there for you with the Barbie Totally Tattoos CD-ROM Kit. This \$20 package is aimed at girls, with the idea that they can make their own fanciful designs, scan and print them and then use the ever-popular "damp cloth" to transfer the resulting temporary tattoos onto their persons. Oh! There's also Barbie Fashion Designer, for \$30. Harmless? Well, mostly. *Mattel Media*, [www.barbie.com](http://www.barbie.com).



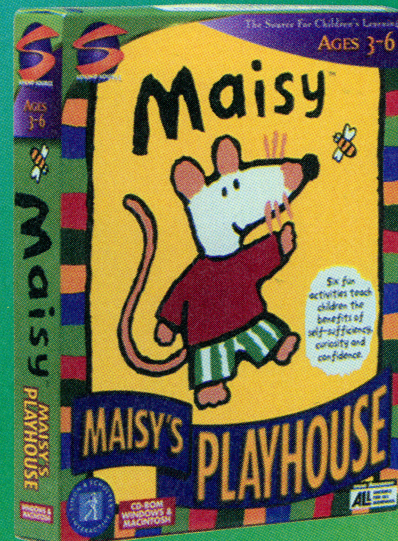
**Alex Says:** Jigsaw puzzles are a perennial favorite of the very young. But 3D jigsaw puzzles are something else again! Wrebbit's Victorian Mansion Puzz3D package will keep your kids busy for many hours, perhaps longer. These digital puzzles are easy on the kitchen table, and can be just as challenging as the real thing. Your kids might just learn something, too. Though we can't guarantee that. *Pizz3D*, \$25, *Wrebbit Interactive*, 514-744-8444, [www.wrebbit.com](http://www.wrebbit.com).

**Jackie says:** Take them to the park to play. [Ed. Note: Very funny, Ms. Dove. Please tell us when to stop laughing.]

## Make a PC Play-Date with Maisy™

Maisy's "can-do" approach is the inspiration for her first-ever CD-ROM.

Kids help Maisy clean, paint, mix, match and so much more. Her playhouse abounds with giggles and surprises.



**Ages 3 to 6**  
Emphasizes self-assurance and independence

Watch for Maisy, weekdays on Nick Jr.®



[www.maisycdrom.com](http://www.maisycdrom.com)

Audio Visual Series/Maisy's Playhouse Content © Universal Pictures Visual Programming Ltd. 1998/1999. Maisy created by Lucy Cousins published by Candlewick Press Inc. All rights reserved. Maisy's Playhouse interactive content and source code © Sound Source Interactive, Inc. and Simon & Schuster Interactive. All rights reserved.



# Holiday Gift Guide

## Gifts for the Gamers in Your Life

**Alex says:** *Bugdom*, from Pangea Software, is a great gift for your kids, especially if they've been infatuated with Pixar's *A Bug's Life*. Take control of Rollie McFly, who's on a mission to save ladybugs from nefarious fire ants. Along the way you'll get to ride dragon flies, water skippers, and even venture into the caverns of a beehive.

Saitek's Cyborg 3D is an excellent joystick for any serious gamer. With its fast USB interface, it'll have you flying faster, turning quicker, and destroying more baddies than any other stick out there. Plus, you can customize it to fit any hand you can find attached to a body. With a quick turn of the included tool, you'll have a customized hand grip and button placement.

*Railroad Tycoon II Gold Edition*, from Gathering of Developers (GOD), is the perfect gift for any Dad who's into trains. What Lionel buff wouldn't lust after a chance to play robber baron over the entire USA during the railroad boom of the 1800s? For just

\$49, you can give your favorite conductor an E ticket to funsville with this little gem.

Imeron's Intensor FX is one sweet gift for a gamer. Plug this puppy into your Mac, Playstation,

TV, or stereo, and you can sit on your music. The Intensor FX is a speaker/subwoofer that will rattle the fillings out of your teeth. Plop it down on the couch and sit on top of it. You'll feel every missile being launched, hear every scream as your enemies run for cover. This is one seat that's got personality.

*Bugdom*, Pangea Software, \$30, [www.pangeasoft.com](http://www.pangeasoft.com)  
*Cyborg 3D*, Saitek, \$65, 310-212-5412, [www.saitekusa.com](http://www.saitekusa.com)

*Railroad Tycoon II Gold Edition*, \$49, GOD, 214-303-1202, [www.poptop.com](http://www.poptop.com)

*Intensor FX*, \$89, Imeron, 919-467-4800, [www.imeron.com](http://www.imeron.com)

**David Says:** *Lode Runner 2*, by MacSoft, is a fine game indeed. Challenging, wacky, and nonviolent, this \$30 game is filled with incredibly engaging

graphics and an evocative, non-repetitive soundtrack.

If your gamer has an iMac, you might want to consider a *Wow Thing*. It's a \$30 box from SRS technologies that gives your iMac a bigger, beefier, more full-bodied sound.

See our review in this issue, in fact.

*Lode Runner 2*, \$30, MacSoft, 800-229-2714

[www.wizworks.com/macsoft](http://www.wizworks.com/macsoft)  
*Wow Thing*, \$30, SRS Technologies, 949-442-1070  
[www.srslabs.com](http://www.srslabs.com)



**John Says:** I was never the biggest Star Wars fanatic, though I could do a pretty convincing Chewbacca impression as a lad. NNNRRRUUHH! Still, Lucas Learning's recently released *Pit Droids* just fills me with giddiness. This is a game and a logic-learning tool; what's not to like? The droids (robots under your command) are charming little metallic doofuses, capable of great things when properly instructed.

There's also the ATI XClaim VR 128, a powerful graphics accelerator with built-in video-capture and TV-tuning options. With this, you could theoretically play *Marathon* while watching "Soul Train." Hey — *that's* not Don Cornelius!!

*Pit Droids*, \$30, Lucas Learning, 888-532-4263, [www.lucaslearning.com](http://www.lucaslearning.com)  
*XClaim VR 128*, about \$250, ATI Technologies, 905-882-2600, [www.ati.com](http://www.ati.com)

**Molly says:** Your gamer can no doubt understand the need to duck, weave and wander while game-playing.

The iShock, a programmable USB game controller, is the way to go. Vroom, vroom! It's totally compatible with the iMac or G3 (Mac OS 8.5.1 or better. Sorry.), with fully programmable buttons — and they're nice and BIG! Plus, you knew it was coming: it's translucent.

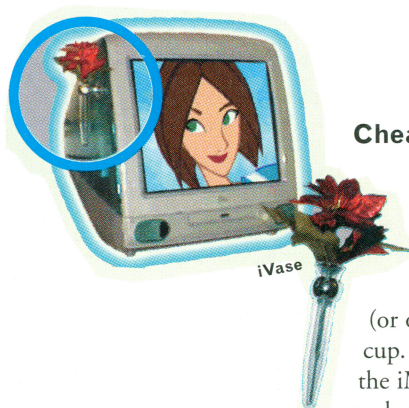
Also, for that vicious killer grinning at you from the other side of the dinner table, *Unreal Tournament* has it all. The sequel to *Unreal* offers all the cheesy trash-talk, all the wanton slaughter, even fully rendered bullet casings dropping out of your sniper rifle! Wow.

*iShock*, Macally, \$39, 800-644-1132, [www.macally.com](http://www.macally.com)  
*Unreal Tournament*, \$45, MacSoft 800-229-2714, [www.wizworks.com/macsoft](http://www.wizworks.com/macsoft)



# Small, Medium & Large

Our Picks for Cheap, Moderate & Expensive Gifts



## Cheap, Cheap!

We're just endlessly amused by the concept of the iVase. It's a delicate little \$10 flower vase that attaches to your iMac (or other computer) via suction cup. What computer other than the iMac could have inspired such whimsy, we ask (rhetorically, of course)?

*FreeVerse, 212-929-3549, [www.freeverse.com](http://www.freeverse.com)*

## Moderate

Most Mac users would thrill to the idea of getting a CD-ReWritable drive, so they can either make their own CDs or archive their important data. Media is cheap — about \$3 a disc these days — and choices are many. For users with USB Macs, check into the \$529 Slimline CD-RW from Freecom (this one's actually a ReWritable model). It's very slim and portable, and runs on a rechargeable battery pack. There's also the QPS Que! CD-RW, also USB, for about \$300. It's blue and white but also somewhat bulky, and doesn't run on batteries.

*Freecom, 800-483-5336, [www.storagecompany.com](http://www.storagecompany.com)  
QPS, 800-559-4777, [www.qps-inc.com](http://www.qps-inc.com)*

For users with SCSI ports (either on older Macs or on newer G3/G4 models equipped with SCSI cards), check out a SCSI CD-RW drive. There's lots to choose from, but we just adore the Yamaha CRW line. Check out the CRW 8424 for a rockin' good time — it's got an 8X CD-R speed, 4X CD-RW speed and 24X CD-ROM speed. It's about \$399 for an internal version or \$499 for an external.

*Yamaha Systems, 800-543-7457, [www.yamaha.com](http://www.yamaha.com)*

## The Works

For the Mac user who has everything, there are few choices left. They've seen everything, know everything, and by this time are so jaded, so *sick of it all*, that there's little left that can impress. For this Mac curmudgeon you may need to reach deep (deep, deep) into your pocketbook for The Works — the fantabulorifically mesmerizing G4 Power Mac with the intensifigoric Apple Cinema Display.



Cinema Display



Apple's G4

Though this combo will cost you around \$6,500 for the 450-MHz version, this is truly the diamond solitaire of Macintosh gifts. As we mentioned in last month's MacHome, the G4

PowerMacs are so fast and powerful it's not even funny — in fact, their supercomputer-level performance has prompted the US Government to place

export restrictions on them (turn your household into a superpower!). Aside from that, buying the G4 Power Mac/Cinema Display combo is currently the only way to get the Cinema Display, a 22-inch LCD (liquid crystal display) letterbox-format screen that's sure to fill even the staunchest Scrooge with holiday glee.

*The Works (G4 PowerMac with Apple Cinema Display), about \$6,500, Apple Computer, 800-767-2775, [www.apple.com](http://www.apple.com).*



## Personal Finances and Your Mac

Or, Where Has All the Money Gone?

**K**eeping track of your finances is no small task, and it's something that usually gets postponed until it becomes a much bigger, headache-inducing task. It usually involves poring over your checking and savings registers with a calculator, gathering your statements from credit card accounts, loans, and other expenses, and performing all sorts of mathematical pyrotechnics in order to get a picture of where you stand. No fun.

Personal finance software promises to eliminate, or at least substantially minimize, these sorts of hassles. And when it comes to personal finance software for the Mac, the word is Quicken. There are a bunch of other applications designed for managing your business finances, and there's a slew of shareware on the Web to help you manage your personal finances, but in terms of robust commercial software, Intuit's Quicken stands alone. The latest version, Quicken 2000, offers a slicker, more customizable interface that promises to give you even better control over your cash than its predecessor, Quicken '98.

### What Is Quicken?

Quicken presents you with a series of windows into your financial picture — some provide you with views of individual accounts, and some provide you with integrated views of all your accounts working together. Each individual account window is a simple ledger showing lines of transactions — money coming in or money going out

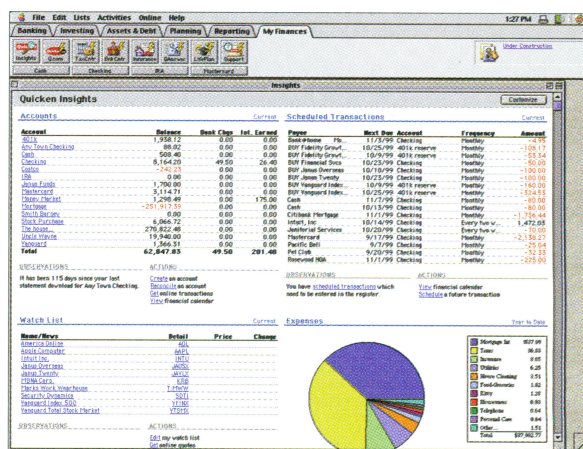
— and a total at the bottom showing the current balance. Various summary windows show you a list of all accounts, with a final figure at the bottom representing your (*gulp!*) net worth.

So the beauty of Quicken is that it shows you, with painstaking clarity and detail, exactly how little money you have. And this is a strength — for only with this knowledge can you understand your situation and make changes. You'll then be able to answer such questions as, "Why don't I seem to be saving any money, even though my income far exceeds my expenses?"

The program's main interface is organized as a series of screens sorted by overlapping tabs, just like those in a set of file folders. These screens are labeled Banking, Investing, Assets & Debt, Planning, Reporting, and Quicken

Data. Each screen provides you with buttons that call up tools appropriate to that particular area, which makes for a clean, sensible interface. And if you want to rearrange the buttons that appear on each screen, you can do so very easily.

Quicken 2000 now offers an Insights window, which shows you the Big Picture — all your accounts with your total net worth, a list of any transactions you've scheduled for a future date, a watch list for stock prices you'd like to keep an eye on, and a pie chart illustrat-



The new tabs make for a cleaner interface, and the Insights window shows you the big picture.

ing how you're spending your money. And for each piece of information it presents, it offers suggestions about new things you can try. As with the screens of Quicken itself, you can customize the Insights window to show just the information you want to see.

### Other Goodies

Once you get involved with Quicken,



you'll soon realize it's a veritable cornucopia of tools. It's got a special way of keeping track of loans, including scheduling repayment. It's got tools for planning your investments and planning for the future. It also comes with a series of "sub-applications," such as the Emergency Records Organizer and the Tax Deduction Finder. These are good additions, but I would have preferred if they were integrated within Quicken. The first time I tried to run the Emergency Records Organizer I got an *obscure error* message relating to memory, and not knowing that I had opened a separate application, I mistakenly added more memory to Quicken. Also, these sub-applications have a slightly different look than the main application. So although Quicken 2000 is filled with an abundance of features, some of them feel a bit scattered.

### The Electronic Checkbook

Before you get started with Quicken, it's a good idea to first balance all of your accounts in the conventional manner (i.e., with a calculator and paper), before you transfer the information to Quicken. If you're feeling brave, you can just dive right into Quicken, enter all of your outstanding transactions, and let the program figure it out. The difficulty with this approach, however, is that you're learning a new program while figuring out your balance, and although Quicken is very easy to use, I found it extremely useful to start out with numbers I already knew were correct. That way, you're free to experiment with customizing the way you view your finances, which is Quicken's main strength.

Quicken's electronic checkbook is well laid out and easy to use. The current day will always appear as the default when you're entering a new check, but if you want to change that, it's easily done. Quicken also keeps track of your check numbers, so for any transaction, there's a minimum of cumbersome data entry.

You can enter transactions from within Quicken, or you can use a small sub-application called QuickEntry, which contains just the data-entry portion of

Quicken. Then, when you next start up Quicken proper, you get a message telling you your work is being transferred from QuickEntry back into Quicken. However, I don't really see the benefit of the QuickEntry application — Quicken itself starts up fairly quickly, and as I said, it's pretty easy to use for adding transactions.

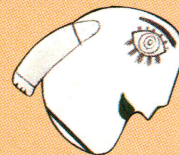
### Quicken in Your Pocket

But therein lies the rub: How can you keep track of your finances if you have to sit down at your Mac and start it up every time you want to record a transaction? You'll likely have to carry around slips of paper to remind you of the transactions you'll want to record later. And what about cash? How can you keep track of all those lunches, movies, candy bars, and other purchases that pepper our busy days? For all of these questions I have one answer: Pocket Quicken.

LandWare's Pocket Quicken runs on handheld computers that use the Palm Operating System. This wee OS uses icons you control with a stylus, and it allows you to transfer information back and forth between the handheld computer and your Mac. Handheld computers start at around \$180. Pocket Quicken doesn't have the extensive powers of Quicken 2000, but it serves a noble purpose: It allows you to record transactions wherever you take your Palm and import them into "Big Quicken" when you get back to your Mac. So, in a crowded restaurant, just turn on the Palm, use your stylus to tap Pocket Quicken, tap New, tap Payment, then fill out the specifics of the transaction, going into as much detail as you'd like. All these transactions will then be cleared from the Palm, and the revised account balance from desktop Quicken will be downloaded to the Palm. My only complaint with this capable program is that it requires a tad too many taps for simple processes.

### Categorically Speaking

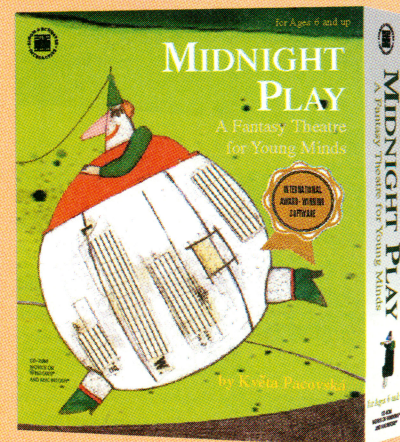
Another of Quicken's main strengths is that it allows you to assign categories to all your transactions. So when you enter a check to Joe's Supermarket, for example, you can select "Groceries"



**The man  
in the moon  
beams his light  
on the sleeping  
players and the  
fun begins...**

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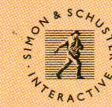


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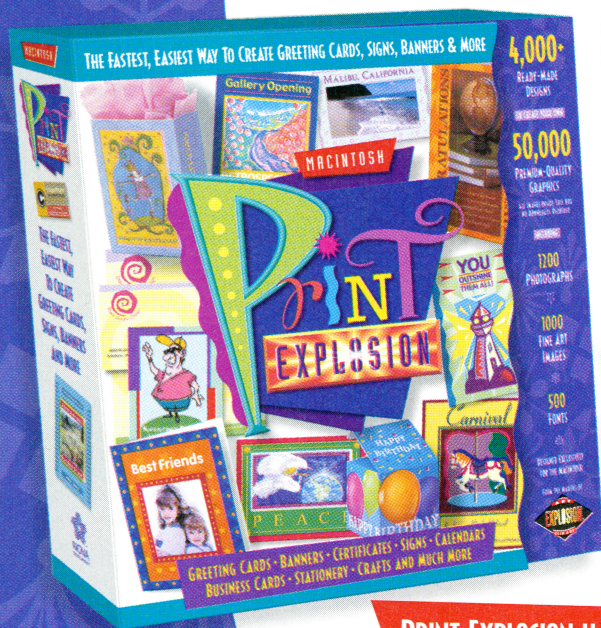
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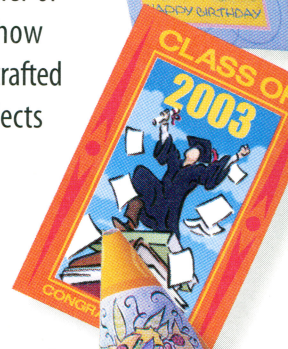
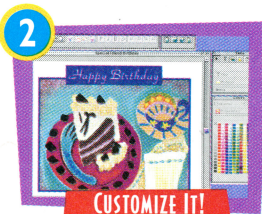
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from a pop-up menu to assign it to that category. And when you pick up that bushel of apples from the side of the road and jot that cash transaction into your Palm, you can also assign it to the Groceries category. Then, as the months go by, you can easily call up how much you've spent on groceries, and what percent of your total expenses that represents.

But that's only the beginning. These categories are up to you — you can create any that suit your needs. If you're curious about tracking impulse purchases, you can tag them as such and see the result. Or you can tease out your business expenses with whatever details you require and get an instant rundown. Mark expenses that might be listed as itemized deductions on your tax return, and you won't have to rifle through boxes of receipts later. Your expenses will appear in an orderly list and, come tax time, you can import them directly into Intuit's MacInTax tax-preparation program.

### The Online Connection

Each of the screens in Quicken contains buttons for jumping to specific areas of the Quicken Website (www.quicken.com), which is brimming with up-to-date information on all things financial, covering such topics as investing, mortgage, insurance, taxes, banking, and retirement. The site also includes an assortment of online tools, such as a Debt Reduction Planner. Quicken's Web buttons make for easy integration between the Quicken program and the Quicken Website, but the connection still feels a bit unsophisticated — the buttons jump you over to the main sections of the Quicken Website, but you feel as though you've left the program. Call me a dreamer, but wouldn't it be slick if Quicken itself acted as a browser, and when you clicked buttons for online access, it called up specific information from within the Quicken application on your desktop?

Quicken also makes it easy to set up an online connection to your bank account, as long as your bank supports it, and many banks are beginning to. With online banking you don't have to enter any transactions. Instead, you

download and import them into Quicken. Security is maintained through a number of physical and electronic means. First, the bank mails you a PIN (personal identification number) just as it does with ATM cards. Then, when you get online, your information is obscured from other users by means of 128-bit encryption, which is quite tough to crack.

### Quick as a Wink

At \$60, Quicken 2000 is well worth the investment for keeping in touch with your finances. But if you have an iMac, of course, there is no investment, because Quicken came right in the box along with your computer, and that makes this program an even better deal. So do yourself a favor for the new millennium, and turn yourself into a financial wizard — it's easier than you might think. **MII**

#### rating

Quicken Deluxe 2000

\$60 (\$40 to upgrade from Quicken 98), Intuit  
800-446-8848

www.intuit.com

PowerPC Required



Clean, intuitive, customizable interface; great features; allows you to export data to MacInTax



Some components seem unnecessary, some tools too remote from the main application, connection to Web tools could be more seamless

#### rating

Pocket Quicken

\$25, LandWare

201-261-7944

www.landware.com

Handheld computer running Palm OS required



Integrates beautifully with Quicken 2000, can password-protect application



Requires a bit too many taps for simple operations



Sorry, your Mac is 91 days old.  
Apple tech support now costs up to \$49 bucks.

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All of our technical support operators are dedicated Macintosh professionals ready to solve your problems for only \$24.95.

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Say you saw this ad in MacHome magazine and your call is only **\$19<sup>95\*</sup>**

\*Offer good until 12/10/99

**877-MAC TANK**



## Clash of the Titans

Adobe's InDesign vs. QuarkXPress

**D**o you need a high-end (read: expensive) desktop publishing program? Not for day-to-day posters, flyers, and newsletters. But if you have a home office or you've got a yen to plunge into professional design, you might want to learn about what's out there.

Here, we look at QuarkXPress 4.0, the standard for professional publishing, and InDesign, a brand-new contender from Adobe Systems.

It was like Mohammed Ali, trying to psych-out the competition before a big fight: Months before its initial release, Adobe began an extended media barrage to hype its new publishing program, InDesign. Dubbed a "Quark-killer," the program sports an excellent set of drawing and layout tools as well as full integration with Adobe's Photoshop and Illustrator. The program is also designed with an open architecture, making it possible for Adobe and third-party designers to extend the program in an infinite number of ways.

But InDesign is not in for an easy fight. Quark, the current all-time champion of the publishing industry, is still a formidable competitor. A vast number of publications — including *MacHome* — have made Quark their design and publishing standard, and for good reason: Quark has excellent text handling features and powerful desktop-publishing tools that can still be run on the humblest of Macs.

### User Interface

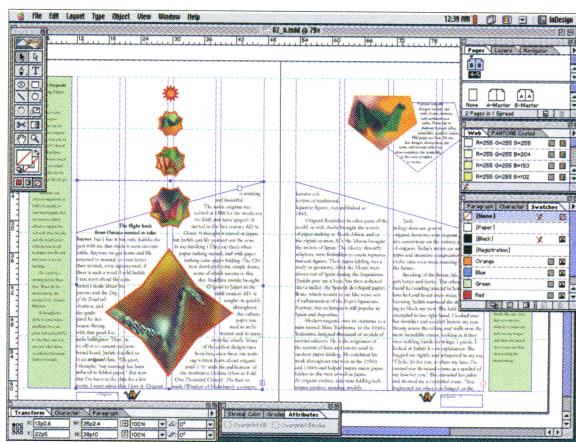
InDesign shares the same look and feel as nearly every other product in the Adobe line.

There is a main toolbar that contains everything you'll need to create text and picture frames, as well as Bézier curves (curves you can define by dragging endpoints), gradients, and polygon tools. In essence, it contains a full complement of drawing tools, similar to what you'd find in Photoshop, Illustrator, or PageMaker.

InDesign's palettes give you quick access to all the major features. Text formatting, kerning (tweaking the space between individual letters), color, and access to every page in your document are all one click away. You can merge each of the palettes into a single group or break them into individual palettes by clicking and dragging their tabbed tops. You can easily hide palettes by pressing the Tab key, so as to get a better view of

your document without having to individually close each palette. You can then quickly reveal them with another press of the Tab key.

Rather than taking on the "Platinum" appearance of nearly every other program available for the Mac, Quark looks decidedly retro by comparison. Every program item, from toolbars to palettes, has a two-dimensional look that gives you that old SE 30 feel. That said, you



InDesign lets you edit high-resolution images right on the page.

won't find a single tool missing. Quark's two-dimensional tools are every bit as functional and efficient as those found in Adobe's InDesign.

Unfortunately, Quark doesn't include any of the efficiencies found in Adobe InDesign. To hide toolbars and palettes you'll need to press a collection of function keys in order to clear your work-



space. You'll also need to re-press the same collection to bring them all back. Also, there's no way to merge palettes, so you're left with a choice between absolute screen clutter or a Spartan set of palettes that you'll have to open and close as you need them.

## Creating Documents

No matter what accumulation of tools you have, or, for that matter, what your program looks like, if it's inefficient, or incomplete, you're destined for frustration. If it's a hassle to add graphics or you can't add text to your document in exactly the way you'd like, and without considerable effort, you may as well resort to setting type by hand.

In terms of the way you design documents, there's very little difference between Quark and InDesign. Both programs allow you to create multiple Master Pages — the templates you use for various pages within your document. Adding text fields or images to documents is as simple as selecting the text or picture tool and adding a box to the page. Both programs allow you to create Bézier shapes, which can act as containers for either text or images. Of the two, InDesign is better at handling overflow text. Each InDesign text box has an inflow box in the upper left-hand corner and an outflow box in the lower right-hand corner. Clicking the outflow box of one and then clicking the inflow box of another immediately flows the text between the two, without requiring you to resort to the toolbar.

InDesign's strength lies in the way it handles images. First of all, InDesign lets you view high-resolution photographs from within your document; Quark only shows you a low-resolution preview. Also, where Quark requires you to use one set of programs for creating or manipulating images, InDesign allows you to edit any Photoshop or Illustrator file from directly within the program. This even includes editing Illustrator paths — a feature Quark can't even come close to. InDesign also provides the facility to convert graphics to text containers, allowing you to morph your text into nearly any shape imaginable.

InDesign also includes a very useful

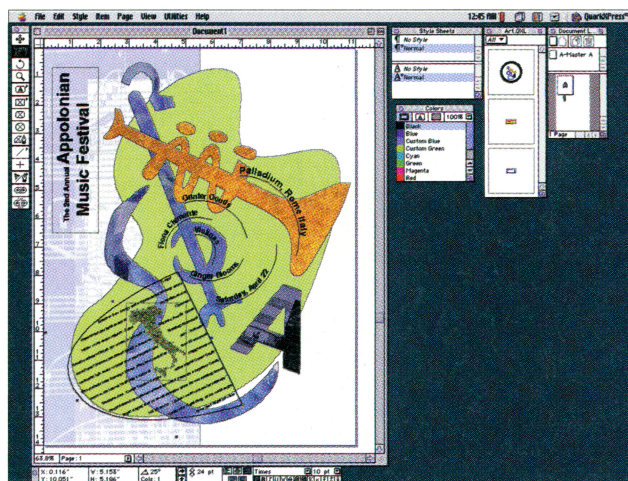
feature that should be familiar to anyone who has used other Adobe products: layers. Using InDesign you can create one layer to handle backgrounds, another for graphics, and yet another for text and drawings. This makes the program a true standout, and is sure to make your work that much easier.

Finally, using InDesign, you can export your document directly to HTML or PDF files without extra plug-ins or Adobe Distiller.

Quark still maintains the upper hand in the area of text manipulation. You've probably seen a number of advertisements where the text whorls into a vortex, giving the impression that you're falling into a whirlpool. This type of text is created using a Quark feature called Bézier text paths. Using Quark you're able to create a Bézier curve that will act as a path for text to ride on. InDesign currently provides no way for you to create text paths — a shortcoming I first discovered when I attempted to open a complicated Quark document using InDesign. Normally InDesign can handle opening Quark documents without a problem — another of the program's features designed to deliver a knockout punch to Quark. Unfortunately, instead of beautifully curved text, I got big fat ugly boxes that contained equally unpleasant text. If you're currently using Quark, it's unlikely that you'll surrender this feature.

## The Final Decision

Does InDesign deliver the knockout punch? Not for anyone who is currently using Quark. InDesign has dozens of compelling features, not the least of which are its excellent image editing tools, layers, and a wide variety of native publishing options. Yet, even though it looks dowdy, Quark still has the spunk to kick InDesign's tail; especially with



QuarkXPress gives you enormous creative control over your text.

regard to handling text, not to mention the fact that Quark still runs on older computers — those with 68020 processors or faster — and doesn't require a Brink's truck full of RAM.

Bottom line? If you're making your initial foray into the publishing and design industry, then there's no question you should run out and buy a copy of InDesign. It's obvious that, with just a few minor tweaks, this program could easily become the desktop publishing standard. But if you're using Quark and you're happy with the way it works, you'll be quick to discover that currently, InDesign doesn't deliver much more than a split decision. **MH**

### rating ★★★★★

#### InDesign

\$699 (\$299 until the end of the year), Adobe Systems

[www.adobe.com](http://www.adobe.com)

PowerPC required

Excellent integration with other Adobe products; excellent image-editing tools; powerful, intuitive interface

Lacks Bézier text tools, hefty RAM requirement

### rating ★★★★★

#### QuarkXPress

\$715, Quark Technology Partnership

800-676-4575

[www.quark.com](http://www.quark.com)

Current standard in desktop publishing, excellent text handling tools, runs on 68020 or faster Mac

Dowdy, cluttered interface; lacks high-end image-editing capabilities



## DeskJet 970Cxi

Hewlett-Packard has always been known for its monochrome laser printers, but it's only recently that it's jumped into the fray with inkjets. Sure, we've seen HP DeskJets before, but none have been as rich in features or as Mac-friendly as the DeskJet 970Cxi, and none has produced output nearly as stunning.

It has the same solid, innovative design of the rest of the DeskJet line — you load paper into a tray in the front, and your printed pages return to the same tray, separated by a platform. In contrast, with the Epsoms, you load paper in from the top, which requires a bit of vertical clearance, and leaves the paper exposed for possible tampering by tots or curious cats.

The 970Cxi stands out because of its duplex unit, a small, clip-on attachment that allows you to print on both sides of



the paper, right out of the box, with a minimum of hassle. However, you do have to pay a premium for this feature — Epson's Stylus Color 750, for example, is about \$150 cheaper.

The 970 also sports an optical calibrator, which means that when the print heads slip out of alignment after months of usage (all inkjets are prone to this), you can have the printer calibrate itself: It prints out a line of test patterns, "looks" at the results, makes adjustments, and prints out another line of patterns, until the patterns match its criteria. This is revolutionary: For all other inkjets, you have to print out a test pattern, look at it yourself, and choose the settings that provide the best alignment.

Its photographic output is astounding — colors are deep and bright, lines are sharp and clear. However, its output still comes out a touch grainier than that of the less expensive Epson 750; when you

look closely at the 970's photos, you can still see dots. For text, using normal settings, it's about the same as other inkjets, but at its highest quality on the best photo paper, the 970's text is ... *sharper than a laser* — I kid thee not.

**The Final Decision** The 970Cxi is a fine printer indeed: It's sturdy, easy to use, and provides some stunning output. It's still a tad grainier and substantially more expensive than Epson's Stylus Color 750, but with the duplex unit, the optical calibrator, and the front-load design, some might find it worth the extra cash.

— David Weiss

### rating



\$399, Hewlett Packard  
800-752-0900  
www.hp.com  
USB Required

Brilliant output, prints on both sides, automatically calibrates print heads

A bit expensive, dots are still visible in gradients

## Microsoft Word 98 Special Edition (for iMacs and iBooks)

Microsoft Word 98 Special Edition for iMacs and iBooks rolls Internet Explorer 4.5, Outlook Express 4.5, and a paperStudio.com greeting card sampler into a package aimed squarely at new owners. It's important to note that aside from these bundled extras, there is nothing particularly special about the package. Microsoft Word 98 SE remains the same overly capable word processor, somewhat alienating to novice users with its myriad features and options. Thankfully, the interactive (but sometimes annoying) Office Assistant offers suggestions and answers to many basic questions — he's a cartoon computer that walks into your document. The included Office Wizards (dialogs that ask you questions about your preferences), make things significantly easier for new users, too, walking them step-by-step through new projects, such as newsletters and calendars.

Word 98 SE offers the same easy drag-and-drop installation as its sister product, Microsoft Office. And although it's branded exclusively for iMacs and iBooks, Word 98 SE happily installed on both a PowerBook G3 and Power Macintosh G3.

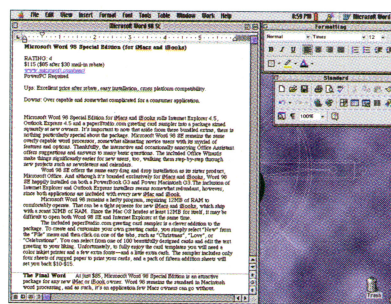
Word 98 SE remains a hefty program, requiring 12MB of RAM to comfortably operate. That can be a tight squeeze for iBooks, which ship with a scant 32MB of RAM. Since the Mac OS hoards at least 12MB for itself, it may be difficult to open both Word 98 SE and Internet Explorer at the same time.

The included paperStudio.com greeting card sampler is a clever addition to the package. Unfortunately, to fully enjoy the card templates, you will need a color inkjet printer and a few extra fonts — and a little extra cash. The sampler

includes only four sheets of rugged paper to print your cards, and a pack of fifteen additional sheets will set you back \$10 to \$15.

**The Final Decision** At just \$85, Microsoft Word 98 Special Edition is an attractive package for any new iMac or iBook owner. Word 98 remains the standard in Macintosh word processing, and as such, it's an application few Mac owners can go without.

— Chris McVeigh



### rating

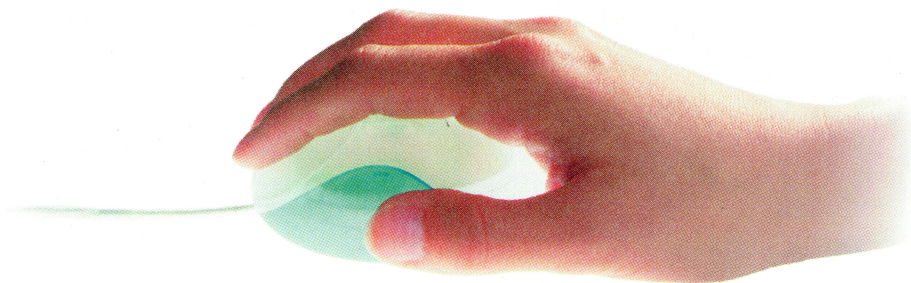


\$115 (\$85 after \$30 mail-in rebate)  
www.microsoft.com/mac/  
PowerPC Required

Excellent price after rebate, easy installation, cross-platform compatibility.

Overly capable and somewhat complicated for a consumer application.





# One click puts your business on the Web!

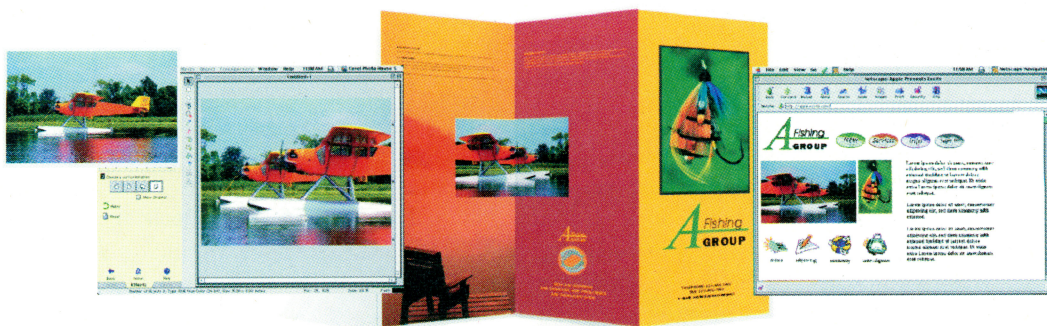
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Create professional-looking business material that will set your company apart, then publish it to the Web\* with the click of a button!



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## Virtual PC 3.0

**C**onnectix has turned heads with Virtual PC, making it possible to not only run PC applications on your Mac, but to enjoy them as well. While the program still exacts a hefty RAM and processor toll, the final result is nothing less than stellar. With the release of version 3, Connectix has added some fuel to the fire, adding features to Windows that most Windows users can only dream about.

The first thing you'll notice in version 3.0 is a new Setup Assistant that, typical of every other PC "assistant" you've ever met, smoothly guides you through the process of setting up Virtual PC to connect to printers and your local area network. There's also a Configuration

Manager that allows you to save several hard disk configurations — Linux, OS/2, or any other OS of your choice — and then boot from those drives by selecting your desired configuration.

Virtual PC has also added AppleScript

support to the program, which makes it possible to open programs, type text, and generally automate your Windows experience — something real Windows users don't currently have the option

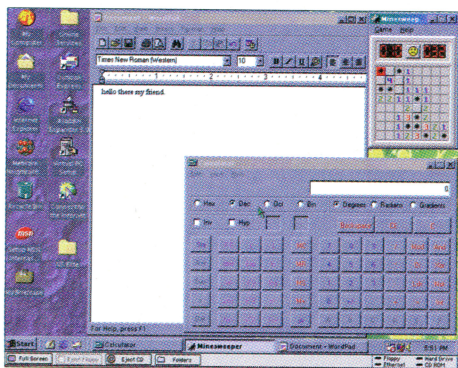
of doing. The rest of Virtual PC's new features will go almost unnoticed unless you carry a stopwatch in your back pocket: faster PC disk access and network speeds.

All of Virtual PC's former caveats still apply: too little RAM and CPU horsepower will make root canal seem pleas-

ant. Also, the program won't recognize that you have a USB-capable computer until you upgrade to Mac OS 9 — a major limitation if you plan on using your USB joystick with that PC game you just bought.

**The Final Decision** Virtual PC is an absolutely amazing program. Excellent PC emulation and even better integration with your Macintosh make the program a no-brainer. Virtual PC is simply the best PC emulation program available for your Mac.

— Jeff Battersby



### rating ★★★★★

\$170, Connectix  
800-950-5880  
www.connectix.com  
PowerPC required

Powerful PC emulation on your Mac, faster networking and disk access, supports AppleScript within Windows

Minimum 64 MB RAM, G3 processor required; Mac OS 9 required for USB support

## Astra 2100U

**T**he Umax Astra 2100U, a USB color flatbed scanner, packs a whole lotta machine into a small, lightweight package, delivering high-quality scans.

The 2100U's hardware resolution is 600 x 1200 dpi, while the maximum interpolated resolution is 9600 x 9600 dpi, with 36-bit color (the higher the bit depth, the more hues it can capture). Those are pretty high-end specs for a consumer-level product.

This model even gives you push-button scanning, so all you do is push one of three small buttons on the front of the device, depending on whether you want to scan with default settings, send the image to a printer, or perform OCR (Optical Character Recognition). You can add an optional transparency adapter for \$69.

For low-volume scanning, the speed was adequate — not greased lightning — but reasonable enough. A 4 x 6 photo at 300 dpi takes about 50 seconds.

While I was quite impressed with the

hardware, the software and documentation were somewhat problematic. The Astra 2100U comes with a software bundle that includes VistaScan 3.5, the scanner driver; Caere OmniPage LE OCR software; NewSoft Presto! PageManager; Presto! PhotoAlbum; and Adobe PhotoDeluxe.

The VistaScan 3.5 interface is friendly looking, but I found it confusing to set preferences, and the poor documentation that came with the scanner did not help much. There is a Help file, though, that contains most instructions on how to set up your scanned image files, including how to choose a file format, how to name image files, and where to store them. Adobe PhotoDeluxe, an image editing program designed for beginners, has a downright clunky interface and is no fun at all. The Photo Gallery was hard to keep track of.

Just a small quibble, I suppose, but I



would have appreciated an on-off switch for the scanner. While it's no trouble to simply unplug your USB connection when you're finished scanning, that's kind of like pulling the plug out of the wall socket to turn off the light.

**The Final Decision** If you need a simple scanner for photos or 8 1/2 x 11.7-inch printed matter on your USB-connected Mac, the Astra 2100U works very well, and once you get used to the software, you'll love it.

— Jackie Dove

### rating ★★★★★

\$169 (optional transparency adapter, \$69) Umax  
800-562-0311  
www.umax.com

Inexpensive, easy to use, high-quality scans

Somewhat confusing software, no paper documentation, no on-off switch



## iDock 2

Some people have such adoration for their iMacs that they'd love to put them on a pedestal. With CompuCable's iDock 2, you can do just that — it's a translucent, ice-colored stand for your iMac that not only lifts it up but also allows you to swivel it from side to side. Beyond that, it provides your iMac with everything it needs to connect to the outside world — a four-port USB hub; an ADB jack for older mice and graphics tablets; not one but two serial ports for printers, modems, digital cameras, and handheld computers; and a floppy disk drive.

The iDock is certainly a bargain — considering that the cost of all of these peripherals, if purchased separately, would be over \$300. CompuCable certainly got the look down, too — it matches the iMac perfectly, right down

to the ribbed, translucent white plastic. It makes for a simpler, spiffier desk, free of tangled, sprawling cables and boxes. However, if you have a brand-new iMac or iMac DV, their little feet won't fit into the grooves of the current iDock 2.

CompuCable should have a new version of the iDock 2 for newer iMacs by the time you read this, though.

The serial ports worked flawlessly with a number of peripherals, including a Palm Connected Organizer, a Canon digital camera, and an Olympus photo printer.

For MIDI, the serial ports are limited, supporting only a handful of products, but CompuCable reps tell me that many more MIDI devices will be supported with Mac OS 9.

The ADB port works seamlessly — plug in an ADB mouse and your cursor will be zipping around the screen as if it were native USB. Its floppy drive per-

forms consistently with other USB floppy drives: It takes about a minute to copy a full disk to your hard drive.

**The Final Decision** The iDock is an enticing solution for connecting to older peripherals, accessing floppies, elevating your iMac, and cutting down on the proliferation of little translucent plastic boxes, especially if you need all the connectivity the iDock offers. But if you want to make changes, such as adding a Zip or SuperDisk Drive, you might find that the iDock a bit cumbersome, since you won't be able to swap out any of its individual components.

— David Weiss

### rating



\$249, CompuCable  
800-344-6921  
www.compucable.com

Provides serial ports, an ADB port, four USB ports, and a floppy drive

It might not fit the latest iMacs, limited MIDI support, may limit your flexibility

## Studio Artist 1.0.1

Studio Artist is an innovative, versatile application: It's a paint program (you can work with bitmap images), it's a drawing program (you can work with vector-based Bézier curves), and you can mix the two for natural brushstrokes that remain editable as vectors. Studio Artist also allows you to load a source image and paint your selected style to the shapes of the image — a great boon for those who can't draw. The truly lazy can let the application automatically paint from a source image. What's more, Studio Artist can do all this with video.

Studio Artist comes with over 600 preset brushes, as well as effects tools, including Goo-like warps and filters.

Perhaps the application's most powerful feature is its ability to "auto-rotate" a movie — that is, it can paint

each frame while tracing out the action. In the past, this has been a time-consuming task, requiring an artist to go over individual frames or work with expensive plug-ins for high-end applications such as Adobe After Effects. With Studio Artist, once a paint style has been selected, it just takes a click of the mouse, and the results are impressive and appear hand-drawn. But be warned: processing a 1MB QuickTime file took 20 minutes on a fast computer, and if any other process (e.g.,

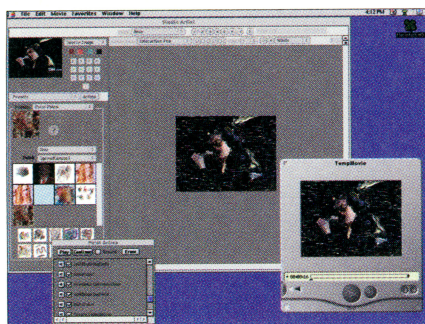
an email alert, or opening a text file) interrupts Studio Artist, you have to start all over.

There are other problems with Studio Artist. Its interface is arcane and primitive: no progress bars with Cancel options for long processes; a myriad of tiny, unlabeled buttons; and the documentation contains many errors, both grammatical and procedural. In addition,

the program is both unfinished and buggy — help balloons often contain the words, "Help hints for presets go here!" and some features don't work at all. Synthetik promises many of these problems will be cleaned up in Version 1.1, which should be shipping by the time you read this (it should also include a printed manual).

**The Final Decision** If you're willing to delve into a difficult interface and put up with a range of idiosyncrasies, Studio Artist can help you produce unique graphics and fantastic video effects. However, casual users will be frustrated early and often.

— Max Frischman



### rating



\$295, Synthetik Software Inc.  
415-864-6582  
www.synthetik.com  
PowerPC Required

Powerful and incredibly customizable, auto-rotoscoping and video effects

Poor interface, buggy, difficult to use



## PhotoGenetics

What if there was a program that let you perfect your photographs without requiring advanced degrees in color management? And what if that same program allowed you to remove red-eye, correct flesh tones, and generally fix all your digital and scanned photography, not by tweaking CMYK ratios or choosing from a multitude of filters, but simply by comparing an original to an enhanced photo and choosing the one that looks better? Sound great? If it does, you'll love PhotoGenetics.

Most programs, such as Adobe Photoshop or MetaCreations PhotoSoap, require you to have some idea as to what filters should be applied to a photo, or what percentage the contrast, hue, or color should be changed in order to make the picture look better. While it's always fun to play with these programs, in most cases the learning curve is very steep and, unless you really know what you're doing, you end up with worse-looking photos than when you began.

PhotoGenetics' greatest feature is ease-of-use. Within a matter of minutes — and without once reading the manual — you'll be turning your worst digital images into the best photos you've ever taken, with a minimal amount of effort. The program uses an interesting process called "Evolution" to change your photos. The Evolution window consists of two panes — the left contains your original photo and the right contains your original with a filter applied — with a sliding scale at the bottom that runs from "Not Better or Worse" to "Excellent." Using the scale, you tell PhotoGenetics whether the filtered photo looks "better" or "worse" than the original. After you've rated four of the filtered photos, the picture on the left is replaced with a new photo that has "evolved" from the choices you just made. You continue this process until the picture on the left is perfect and



then you save your photo. It's that easy and it works amazingly well.

### The Final Decision

PhotoGenetics takes digital photo enhancement out of

the hands of professionals and puts it squarely into the hands of the average digital photographer. Excellent results with minimal effort all in a matter of minutes make PhotoGenetics the perfect enhancement for your scanner or digital camera.

— Jeff Battersby

<b>rating</b>	★★★★☆
<b>\$30, Q-Research</b> 425-888-6609 <a href="http://www.photogenetics.com">www.photogenetics.com</a>	
👍	Intuitive, easy-to-use image enhancement, no learning curve, great results
👎	Not a complete image-editor

## Wow Thing

Audio is a tricky business; there's always something better than you have, whether you're talking speakers, turntable, equalizer, CD player, or cassette deck. And if you get into the professional realm, there's an endless series of black boxes that do esoteric things to the signal, performing boosts, compression, separation, and what-have-you.

SRS Labs' \$30 Wow Thing could be considered a black box, were it not translucent blue. What it does is take an incoming audio signal and boost it, giving you control over the bass, treble, and overall volume. You could accomplish this same task in many ways — by hooking up your computer's audio to the stereo, for example — but Wow



Thing is a conveniently small device that sits between your Mac and the speakers.

For users with cheesy, tinny speakers — you know who you are — Wow Thing makes a huge difference. Highs become higher, lows lower, mids midder. Instruments and sound effects stand out more from the background. Headphones are dramatically affected; games became more immediate and dramatic with the sound boost.

Most everyone who stopped by my desk while we were testing Wow Thing did indeed say "Wow!" when we switched the unit into action. And rightly so. We could add considerable bass and treble to the sound, and give it a heck of a volume boost. Unfortunately, when we used the bypass setting (which supposedly bypasses the "wow" effect and lets you hear your speakers as they really are), some muddiness and coloration of

the sound were evident. We would prefer that a bypass be a true bypass, but it is also convenient that the volume control continues to work, as one could position the unit at an easy spot to reach, negating the need to reach for an inaccessible volume control.

**The Final Decision** Wow Thing is a nice little add-on for \$30. It will make cheap speakers sound much better, and make good speakers sound great. We're not crazy about the bypass mode, but then again there's not much reason to use that mode — just leave Wow Thing on all the time.

— John Poultney

<b>rating</b>	★★★★☆
<b>\$30, SRS Labs</b> 949-442-1070 <a href="http://www.srslabs.com">www.srslabs.com</a>	
👍	Boosts volume and provides boost for bass and treble, cheaper than buying new speakers
👎	Bypass mode results in some muddiness



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## Xerox Docuprint P1202

Look out, world — here come the USB Lasers, and Xerox's P1202 is one of the first out of the gate.

Since Mac OS 8.6 has come out, it's been possible to speak PostScript (a standard printer language) over USB. Before, it was only possible to speak PostScript over Ethernet or Serial connections, so now USB is another viable laser-printing option.

The P1202 is a large, sturdy printer with a 250-sheet paper tray. It's got four indicator lights on the top panel that tell you the printer's status, and a button for printing test sheets and resuming a paused print job. A pull-down tray allows you to accommodate envelopes and other oddly shaped paper. One very cool feature of the P1202 is an



oval window revealing a bright orange paper-level indicator, which makes it easy to know when you'd better feed the printer before that big job.

With a 1,200 dpi (dots per inch) output, this printer cranks out some smooth-looking images. But its contrast is not as fine as Hewlett Packard's 2100TN, a less expensive (\$699) laser printer. To its credit, it's faster than the 2100 — Xerox claims it's 20% faster, and, in fact,


we found similar results in our tests using Microsoft Word and complex PostScript graphics in QuarkXPress, with the P1202 coming in about 18% faster than the 2100TN.

When it comes to ease of use, however, the P1202 has much room for improvement. As of press time, there is no mention of Mac on the box, no quick start guide for the Mac, the Mac is never mentioned in the manual, and the CD has a bunch of obscure Windows files on it. Representatives


from Xerox told me they plan to remedy the situation before you read this. Also as of press time, Xerox confirmed that the printer does not work with the iBook, but because the iBook came out just this week, Xerox should have a fix soon for that as well.


**The Final Decision** The DocuPrint P1202 is a good, fast, USB laser printer. If Xerox improves its Mac-friendliness, and fixes the problem with iBooks, it could be a great USB laser. But even so, I'd sooner spend my hard-earned cash on Hewlett Packard's 2100TN, and I'd print to it using Ethernet. Though it's a bit slower, the 2100TN provides noticeably better output.

— David Weiss

**rating** 

**\$699 (+ required \$150 PostScript Option), Xerox**  
**800-349-3769**  
[www.xerox.com](http://www.xerox.com)

 **Fast, has paper level indicator**

 **No Mac instructions, contrast could be better, doesn't work with the iBook**

## MacTicker 1.5

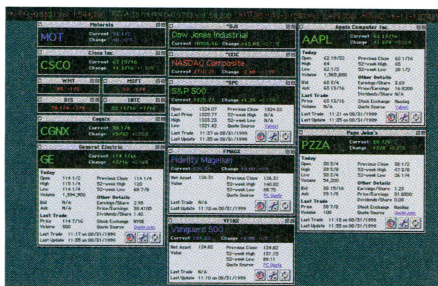
Tracking stocks on the Internet is something of a national obsession.

From Yahoo! to the Motley Fool, the Web is filled with sites to help you create portfolios and even trade stocks right from your Macintosh. But none of these sites — even with their Java Tickers

— gives you the rush of watching the numbers roll by on the “Big Board.” Enter MacTicker. This little program from Aladdin Systems lets you track your favorite stocks, automatically updates the data at user-defined intervals, and makes it easy to follow your favorite stocks on a day-to-day basis.

MacTicker's defining feature is just what its name implies; a scrolling stock ticker that rolls across your screen. You

can customize this ticker to display information in myriad ways — large font, small font, fast ticker, slow ticker, varied colors, and dozens of variations in between.



MacTicker's detail windows are what makes this program truly great. These windows can display current information about stocks, mutual funds, and Market Indexes,


such as the S&P 500 and Dow Jones Industrial average, including the day's opening price, current Ask and Bid prices, and volume. You can also view such history information as Earnings per Share, Price-to-Earnings Ratio, and 52-week highs and lows.

Any MacTicker user who really wants to follow his or her stocks will be disappointed with its inability to store portfolio details. The program provides no way


to track the number of stocks you own, how much you paid for them, or how much your portfolio is currently worth: an unfortunate weakness in an otherwise stellar program.


**The Final Decision** MacTicker turns your Mac into a virtual Wall Street, complete with detailed stock information and a scrolling ticker. While the program is a pure pleasure to use, serious stock marketeers will find that it lacks the ability to display the information they really need.

— Jeff Battersby

**rating** 

**\$30, Aladdin Systems**  
**800-656-5443**  
[www.aladdinsys.com](http://www.aladdinsys.com)  
**PowerPC Required**

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 **No way to track specific details of your portfolio**



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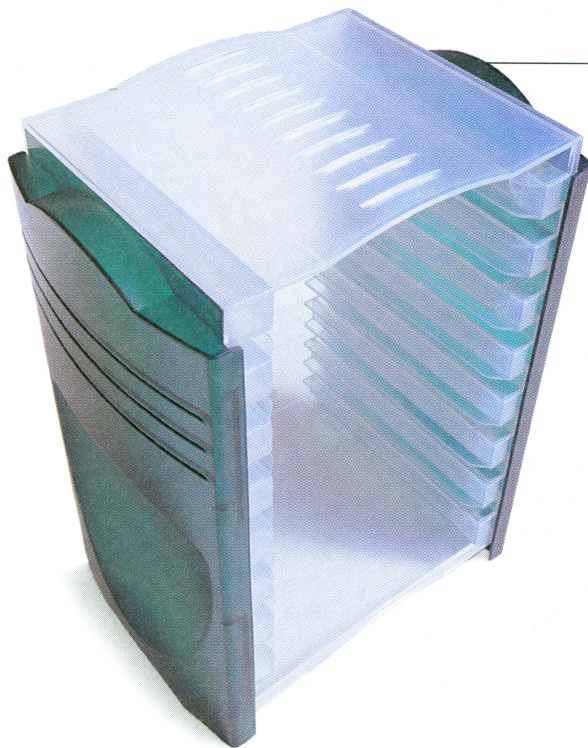
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### IMATION USB SuperDisk Drive.

120MB capacity. USB interface. Uses 1.44 3 1/2" floppies and 120MB SuperDisk. iMac compatible. 49319



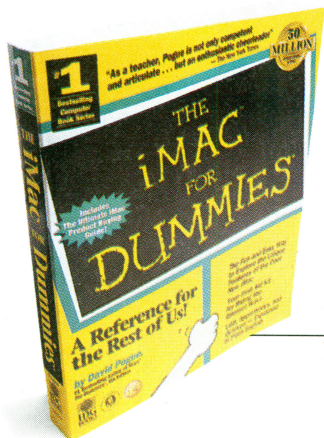
### NEWER USB uDrive.

1.44MB floppy drive. USB interface, iMac compatible. Styled to match iMac. Stackable with other Newer uLine peripherals. 49709



### AGFA SnapScan USB Color Scanner.

600 x 1200 PPI optical, 36 bit. 9600 x 9600 DPI interpolated. 8 1/2" x 11 7/8" scanning. USB interface, iMac and Windows '98 compatible. Agfa Scanwise, Corel Print House Magic. Caere's Omnipage LE 5.0 for OCR. 46149



### iMac for Dummies.

A reference for the rest of us. 63018



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# The Backpack Mac

A Look at the iBook **By** David Weiss

**A**pple knows there's more to computers than computation — that they need to possess a certain unquantifiable *something* in order to become more than just number-crunching machines. Take the iBook, Apple's new budget-priced portable; it's a miraculous blend of form and function.

The iBook is sculpted into a softly rounded, clamshell shaped case. The screen has no latch — instead, it snaps shut with a gentle spring, and opens with a gentle pull. A plastic, oval handle, reinforced with steel, pulls out of the back, and when the iBook is open, the colorful form of the handle makes the iBook stand out from all other portables. Aside from using the handle for the obvious purpose of carrying it around, because it's reinforced, you can use it to lock it up, whether it's in use or tucked away for the night. Along the side are the ports — one for the phone cord, one for 100BaseT Ethernet, one USB port, and one speaker jack.

The keyboard has a good, large, solid keys, and I like the feel of it even a tad more than the one on the PowerBook series. I was, however, a bit disappointed by the iBook's speaker, which has a tinny little sound, and the amplifier driving it doesn't pack much of a wallop. With the volume all the way up on *Nanosaur*, I could hardly hear a thing. So you will probably want to invest in some external speakers.

The iBook was the first Mac to support AirPort, Apple's protocol for wireless data transfer. So with a \$99 AirPort card, you can transfer data wirelessly with other AirPort-enabled Macs, or you can surf the Net remotely via a \$299 AirPort docking station, which has Ethernet and a 56K modem.

## Built to Take It

The iBook is reinforced with very dense rubber, making it much more durable than most portables. When Apple representatives demonstrated the iBook at *MacHome* headquarters, one of them actually took an iBook by the handle and bounced the lil' guy on the table a couple of times — something I would never try to repeat. Due to the amount of durability built into this 'Book, unfortunately, it comes out a bit larger and a bit heavier than the PowerBooks.

## But Don't Judge this Book by Its Cover...

The iBook comes with a 300MHz G3 processor with a 512k backside cache. So in its current iteration, it's a bit slower than the iMacs, which start at 333MHz. But 300MHz is nothing to sneeze at, and it's difficult to perceive differences in the neighborhood of 33MHz, even with a stopwatch. Compared to an original iMac running at 233MHz, for example, the iBook was a little bit faster at opening programs, and at processing Photoshop filters. In terms of reading Web pages, there was no difference at all.

It has a 3GB hard drive, which is not gigantic, but it certainly gives enough elbow room for everything except, perhaps, extensive video editing. It also has a 24X CD-ROM, and a 56K modem. It comes with 4MB of video RAM, and I

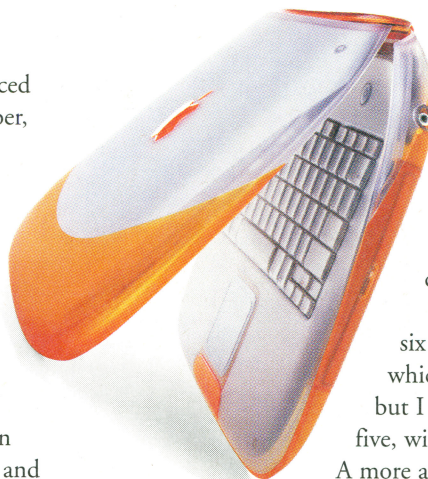
found this enough to keep things humming on the screen

with a minimum of re-drawing.

Speaking of the screen, it's a nice, clear, 12" active-matrix display, smaller than what you will get on the PowerBooks, but with comparable quality.

It claims to provide six hours of battery life, which is not too shabby, but I drained it in about five, with only moderate use.

A more accurate estimate would be about four hours of real-world heavy usage.



## The Final Decision

Even though the iBooks are a tad heavy and have a less-than-stellar speaker, if I were in the market for a portable, this might be the one. For about \$900 less than the PowerBook, the iBook has all the basics, and I think it looks pretty dang slick as well. **MII**

## rating



iBook  
\$1,599, Apple Computer  
800-538-9696  
[www.apple.com](http://www.apple.com)

Stylish, spiffy processor, supports AirPort, nice screen, rugged, nice touches

Poor speaker and sound, heavy, large



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## Safe Surf

The Internet: A window to the world or a two-way mirror?  
Surprise! It's both.

**W**hile you or the kids are sitting in the privacy of your living room cruising the Web and reading and sending email, you might as well be sitting inside of a fishbowl.

That's because while you are online, everything you do, everywhere you go, and everything you say can be recorded and archived. It is there for the prying eyes of marketers, spammers, snoops, crazies, your insurance company, your current or future employer, your spouse (former or current), and whoever else might be interested in your online activities.

"The Internet is the most invasive and least privacy friendly of any communications technology ever developed," says Lance Cottrell, president of Anonymizer, Inc., a San Diego, California, company offering anonymous Internet services.

"The mistake people make is like that old *New Yorker* cartoon that said, 'on the Internet no one knows you're a dog.' Nothing could be further from the truth," Cottrell says. "The number one thing is to be aware."

It may sound like raving paranoia. But even if you consider your life so mundane and nonthreatening that no one could possibly be interested in the Websites you visit, the things you buy, and the email you send, you're wrong. So how can people get information about you?

### Not Private Property

The first crack in the armor of your online privacy is your trusty Web browser. True, your browser can take you lots of places,

but if you're not careful, it can also lead unscrupulous individuals to you through a variety of technical mechanisms.

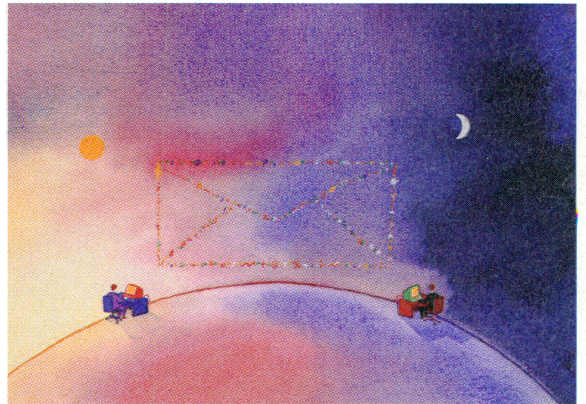
If you use a major browser such as Microsoft Internet Explorer, Netscape Navigator, or America Online, it can reveal a terrifying host of private information.

Your browser can reveal the following things: your IP (Internet Protocol) address, which is very helpful in identifying who you are; your computer name (if it has one);

which cookies (small text files from marketing sites) were sent to your hard drive; the page you previously visited; the brand of browser you are using; your operating system and screen resolution; whether your browser is enabled for Java and JavaScript; your email address (though newer browsers no longer do this); and the name and address of your network administrator or ISP.

Through the use of cookies (see September 1999 issue), a Website can gather information about other sites you have visited and determine your general browsing habits and interests in order to target you for advertisements.

Such information can be sold to third parties intent on making a buck off you and stuffing your email box full of unwanted messages called *spam*. Depending on how much information you have voluntarily given out about yourself, you could be targeted by corporate marketers; telemarketers who call during dinner; and psychos who commit crimes, steal identities, and harass others.



### Details about You

"Most surfers build up a large and detailed record of the sites they visit, transactions they participate in, and preferences they express. Providers of Web services are not at all shy about using this information, as it's quite valuable," explains Ralph Levien, who runs an anonymous remailer list at [publius.net](http://publius.net). (See sidebar on anonymous remailers.)

But that's not all. If you participate in Usenet newsgroups (Internet discussion groups located on a non-Web section of the Internet), and you use your real email address to post messages, watch out. Your browser can record information about the



newsgroups you visit, files you download, images you view, and messages you send. If you're using Internet Explorer (the default browser on the Mac), your browser can even reveal the text of all the news messages you have read. (Yikes!)

The problem with all of this is the Web's ability to store and archive everything. Says Matt Curtain, senior systems developer and engineer at Ohio State University's Computer and Information Science Department, "People give away too much information about themselves. They're used to doing this in informal exchanges all the time. It's not a big deal in that context because people have imperfect memories and it isn't often that people get together in order to compare notes about what other people have told them."

"In the electronic world, it's important to remember that computers' memories are essentially perfect and computers do get together and compare notes about the users they know."

### Protect Yourself

So, what can you do to protect your pri-

## Surfin' Tips

Enjoy the Internet and all it can offer, but keep a few things in mind.

- **Beware of contests and online games**, especially ones in which you have to fill out forms giving away information about yourself.
- **Never answer personal information about your income**, or your social security number, credit card number, address, or telephone number on Websites you do not know or trust.
- **If you have to answer questions to surf a Website**, and you really want to do it, then lie.
- **Verify a Website's privacy policies** before giving out any information about yourself.
- **Remove your name and email address** from your browser's identity preferences so they do not travel with you.

## They're Reading Your Mail

**A**t first you scoff. Not me, you say. I've got nothing to hide. But, consider this: Even if nothing you do or say is illegal, immoral, or unethical, it should still be private. Why should people unknown to you have access to your private communications with others?

They shouldn't, but that is the landscape of today's email system. The more you know about how it works, the better able you are to decide what level of security you need.

Perhaps you live in a community that does not tolerate political dissent or diversity. Perhaps you don't want your employer finding out the content of your emails as you search for a new job. Or maybe you (or someone you know) live in an abusive household and must seek help anonymously. If you are a professional who needs to safeguard confidential information, or even if you are just interested in protecting your privacy and keeping spam out of your mailbox (and why shouldn't you be?), an anonymous remailer may be the thing for you. Many anonymous remailers are free, but others now charge for the service.

"When you're discussing sensitive issues, or just don't feel it's appropriate to use your email address, anonymous remailers give you a relatively secure way of participating in the Internet without revealing more about yourself than you want to," says Ralph Levien, who runs the remailer list at [publius.net](http://publius.net).

### Email is Not Private

Even though email downloads directly to your computer screen in the privacy of your own home or office, email messages are as public as a billboard, as readable as a postcard. That's because the decentralized nature of the Internet forces each email message to bounce through multiple servers (other computers on various networks) before reaching its destination. At each server point, your message can be intercepted, read, copied, and stored.

### How They Work

An anonymous remailer lets you send email or messages to newsgroups on the Usenet (a non-Web but very popular part of the Internet) without having your name or email address attached to your postings.

How? Emails come in two parts: the header (which contains information about you) and the body (the actual message). Anonymous remailers separate the header information from the body, sending only the message. Anonymous remailers actually strip away the headers of your email and replace it with bogus information, and then they forward it to its intended recipient. Different kinds of anonymous remailers offer differing levels of security.

The simple arrangement just described can be made even more secure via a method called "chaining," wherein your message is sent from one anonymous remailer to another. The second remailer automatically strips off the headers from the first anonymous remailer and replaces it with its own. Whereas it would be hard enough to trace an anonymous email, it would be twice as difficult to trace two through the anonymous pipeline.

Some remailers require that you encrypt your message as well, so that not only are the headers stripped off, but the message itself can only be opened by its intended recipient.

### Super Private

Two very popular remail technologies do much more than simply strip off header information: Cypherpunk and Mixmaster.

*continued on next page* ➤



## Reading Your Mail Continued ...

Cypherpunk remailers are actually remailer chains that pass your encrypted message through several anonymous remailers. That makes your message tough to trace and decode. The Mixmaster remailer not only encrypts your message but, in effect, breaks it up into small chunks of information that are sent anonymously from remailer to remailer until they reach their destination, where they are pieced back together.

If you are dealing with sensitive political topics, or medical or financial information, you may want a truly anonymous remailer. Even though they may be harder to use, they are also harder to crack. With genuinely anonymous remailers, operators cannot be forced to divulge your identity because they don't know it. Some remailers let sender and recipient communicate anonymously.

### Pseudo?

There is also a type of anonymous remailer called pseudo-anonymous remailer. The difference between an anonymous remailer and a pseudo-anonymous remailer is that a pseudo-anonymous remailer is an account you open with a remailer operator who actually knows your email address. Thus, if your remailer is ordered by the government (or an attorney with a subpoena) to divulge your address, he or she may be forced to do so.

Do you need to be concerned about the government prying into your email? If you're not doing anything illegal, probably not. Mostly, it is family members, employers, marketers, and troublemakers who may try to monitor your mail, and remailers are under no obligation to divulge anything to them. So the lesser level of security of a pseudo-anonymous remailer could work well for you.

### Should You Encrypt?

One way to shield your communications from your ISP, your co-workers, marketers, or just about anyone else, is Pretty Good Privacy (PGP) encryption.

PGP is an easy-to-use computer program that you can download for free from the Internet ([www.pgpi.org](http://www.pgpi.org)) that encrypts and decrypts your email messages so that only their intended recipients can read them.

PGP is a type of public key cryptography. When you start up the program it generates two keys that belong only to you. One is a secret key and the other is a public key. You give the public key to the people you are emailing so only they can open or decrypt your email. PGP is highly secure.

### Which Is Best for Me?

You can find remailers by searching the Internet for the keyword "remailer." Yahoo has a page of anonymous remailers. However, in the universe of free anonymous remailers, some are here today and gone tomorrow. Some anonymous remailers are Web forms that you can fill out and send directly from Websites, or, with others, you can use your own email program.

But nothing is foolproof. If you use an anonymous remailer to do something illegal, unethical, corrupt, or obscene, the law of the land can and likely will commit its vast resources to hunting you down and prosecuting your sorry self. So be nice.

privacy online? Plenty. Just as we all have different reasons for going online, there are different levels of security precautions appropriate to each individual. And, not surprisingly, there are a host of Internet-based resources — both free and fee-based — that can fulfill almost all privacy needs.

Lance Cottrell of Anonymizer.com suggests new users start thinking about their security needs early. "Newsgroup postings can be logged, archived, and searched. Search engine keywords are also searchable. Chat room discussions are archived," he says. "My prediction is that in the next few years all employers will do a search for your name on the Internet." Cottrell also recommends surfing the Internet anonymously with his Anonymizer.com, which offers a variety of free and fee-based anonymous Web services. If you just want to surf anonymously, you can use the free Web-surfing program from the home page. However, that can be slow. For \$5 a month, you can get a faster speed. Anonymizer.com also offers an anonymous remailer and Web hosting.

Another anonymous Web-surfing utility can be obtained at IDzap.com, which also gives visitors free anonymous browsing by having you sign in and pick a user ID and password.

How do these programs guarantee your privacy? Explains Curtain, "Most work by offering a 'proxy' service. That is, instead of connecting to your target site directly, you would connect to the proxy and tell it which document you want.

"Then it would make the fetch for you, and return the information to your client. In the process, it will typically drop any cookies that are sent, to prevent someone from tracking your usage through the anonymizer." ■■

## Anonymous Remailers

### Yahoo List of Anonymous Remailers

[http://dir.yahoo.com/computers\\_and\\_internet/security\\_and\\_encryption/anonymous\\_remailers/](http://dir.yahoo.com/computers_and_internet/security_and_encryption/anonymous_remailers/)

### Anonymizer

[www.anonymizer.com/3.0/services/email.cgi](http://www.anonymizer.com/3.0/services/email.cgi)

### Replay Associates

[www.replay.com/remailer/anon.html](http://www.replay.com/remailer/anon.html)

### General Privacy Information

#### Interhack

[www.interhack.net](http://www.interhack.net)

### Electronic Frontier Foundation

[www.eff.org](http://www.eff.org)

### Center for Democracy and Technology

[www.cdt.com](http://www.cdt.com)

### The Privacy Page

[www.privacy.org](http://www.privacy.org)

## Anonymous Web Surf Software

### Anonymizer

[www.anonymizer.com](http://www.anonymizer.com)

### IDzap

[www.idzap.com](http://www.idzap.com)

### Rewebber

[www.rewebber.de](http://www.rewebber.de)



# Are You Clever Enough to Find the Treasure?

## Uncle Albert's Magical Album,

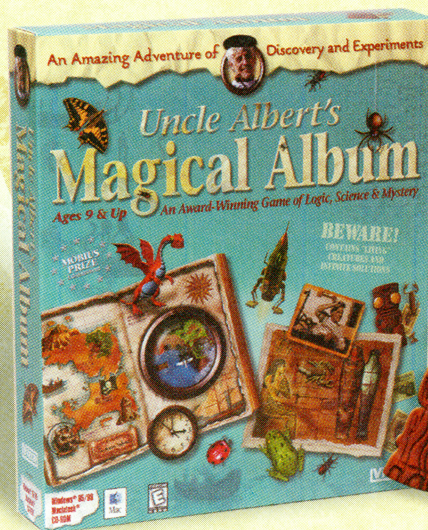
by VTechSoft, is an award-winning children's adventure software game of Logic, Science and Mystery.

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Visit [www.vtechsoft.com/unclealbert.html](http://www.vtechsoft.com/unclealbert.html) to get the latest product information, view a product demonstration and enter a drawing to **WIN GREAT PRIZES!**

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## Book Country

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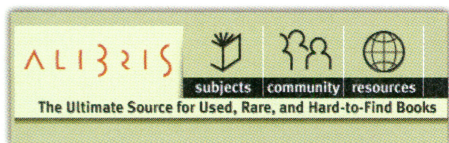
#### **D**espite the admittedly outrageous amount of time Bookmarks

spends in cyberspace, we always admit to anyone who asks that our favorite activity is relaxing on the couch reading a book. We kid you not!

As we all know, blockbusters pushed by prosperous publishers are always easy to find. The newest John Grisham suspense yarn is all over the place — at your local bookstore, your friendly chain store for that 20% discount, and of course, through such online megadealers as Amazon.com.

But it is often those older, less popular books — such as the one written 20 years ago by an obscure academic about your favorite subject — that you may go on wanting for years. With the Web, you astronomically increase your chances of finding that the exact book you're looking for — whether or not it is currently in print.

That is the focus of Alibris.com, a Website specializing in used, rare, and out-of-print books. With Alibris.com, if your obscure selection is for sale somewhere in the world, you will likely catch up with it, often for a very reasonable price.



"Alibris offers you the ability to find books that you previously couldn't," says CEO Marty Manley. "Here's an example: You've tried for 20 years to locate a favorite book from your childhood that's no longer in print at every book store in your town, and for 20 years, you've heard the words, 'Sorry it's out-of-print.' No longer," Manley explains.

Alibris, which is housed in an old factory building in Emeryville, California, and is decorated with poster-sized reproductions of the staff's favorite selections, has more than 50 technical, dealer relations, customer service, and marketing employees bringing buyer and seller together. How?

"Alibris serves as a kind of virtual marketing co-op coup for our booksellers," explains Manley. "After posting their inventory, Alibris' booksellers have access to millions of customers through our own Web store and our business-to-business relationships with online booksellers, libraries, and traditional book distributors. Additionally, we advertise on behalf of all our booksellers on the Web, in print, and throughout the country on public radio."

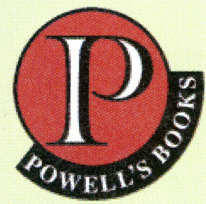
As a Web connoisseur, Bookmarks likes Alibris.com's site design. A stylish yet friendly ecommerce site, Alibris.com offers a vast set of resources and services. You can search for any book you want by author's name, keyword, publisher, or price. Bookmarks was thrilled to find that several out-of-print books from an old college professor were still in circulation, not forgotten.

The Alibris.com Website also includes Subjects, Community, and Resources sections. Subjects lets you browse your favorite book subjects by author, title, and subject. The Community option facilitates communications with fans of different book genres, accomplished by providing links to relevant Usenet newsgroups. Resources connects you to worldwide events, fairs, book signings, and other programs.

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If you're looking to appease your distinctive literary tastes with used, rare, and antiquarian books online, it never hurts to comparison shop for the best deal. The following are sophisticated ecommerce Websites where you can search and order online via credit card. In some cases, you can even order by phone or mail.



Powell's Books is a famous new- and used-book emporium in Portland, Oregon, that also has a very spiffy Website. A clean, easy-to-read interface gives you links to all pages with loads of information.

Powell's is fun. It's got deals; it's got raffles; it's got a newsletter; the staff gets to push its favorite books online. The readers get to vote on their favorite books too.

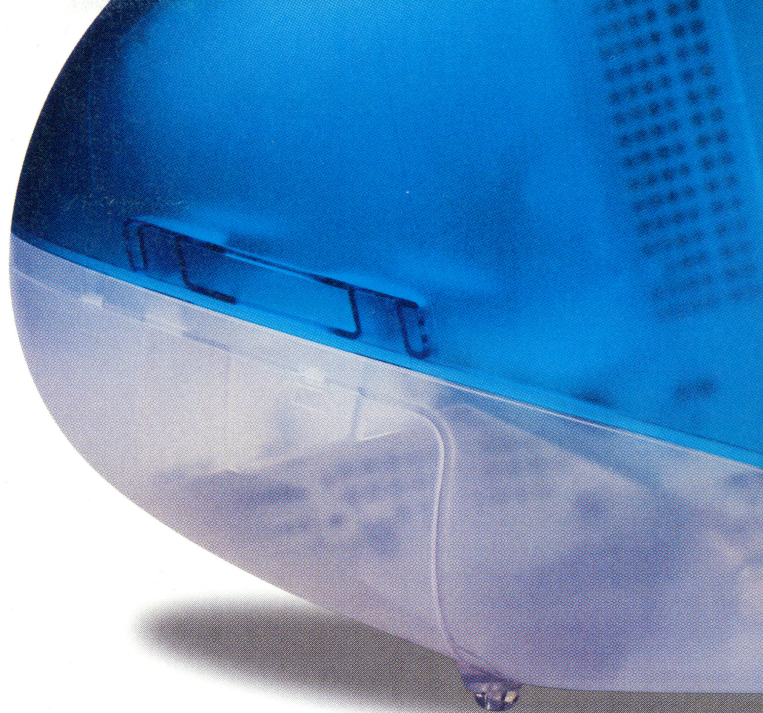
There is nothing fancy about the Advanced Book Exchange Website. ABE means business. You want books? They've got books — some 13 million of them. The home page consists of a set of links, and your only clue as to the site's mission is the statement, "World's Largest Source of Out-of-Print Books." Not exactly a design concept, but, hey, they figure you can read.

Bibliofind, in addition to heading you to the sellers of exactly the book you want in any part of the country or the world, also has a community section featuring mailing lists targeted toward different customers.

Bibliofind's Website has great reference materials. We especially liked the complete glossary of Antiquarian Book Collectors' Terms and definitions of rare book terms.

*Powell's Books*, [www.powells.com](http://www.powells.com)  
*Advanced Book Exchange*,  
[www.abebooks.com](http://www.abebooks.com)  
*Bibliofind*, [www.bibliofind.com](http://www.bibliofind.com)





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## Free Learning!

### Shareware for the Student of the World

Shareware isn't all stapler simulations and control panels. There are a plethora of educational titles out there to teach you everything from counting to particle physics. In fact, a quick Web search will net you a veritable cornucopia of advanced scientific shareware programs that would satisfy even Einstein's curiosity.

And for you teachers out there, there are programs to keep track of grades and attendance, and even games to pit your students against each other in a festival of cranial trivia.

#### More Science from More Science High

Want to brush up on your scientific acumen? There's more than enough out there to turn you into a virtual Ph.D. Whether you want to analyze sound or find out at what temperature Einsteinium becomes a gas, there's something for everyone. *Buzz-o-sonic* ([www.buzzmac.com](http://www.buzzmac.com)) is a nifty program that shows a wave display of sound and analyzes the resonant frequencies of anything coming through your microphone. You can play music or simply whistle, and *Buzz-o-sonic* will graph out the wave form of your sound and tell you when you hit specific frequencies. This is a great program for anyone interested in music, as it breaks down sound to a purely scientific level.

If you're working hard on your senior year chemistry class, however, sound is not the first thing on your mind. Having nearly failed the class myself, I wish I'd had a copy of *The Atomic Mac* by Chris

Smolinski. This sweet little number gives you a crack at the most comprehensive periodic table you've ever seen. There are more than 20 ways to view the table, and each view color-codes elements so you can easily see which ones will turn into a gas at room temperature. The state view in particular helps a lot, as you can slide a bar to change the temperature and easily see what elements are solids, gases, and liquids by color. Also included is a molecular weight calculator, in case you've lost a neutron or two along the way. *The Atomic Mac* is an indispensable tool for anyone forced into chemistry by sadistic graduation requirements.

If you have a need to get subatomic, you might want to check out OnScreen Science Inc.'s *OnScreen Particle*. While

the company gets its name from *Star Trek*, the physics the program demonstrates are pure fact. *OnScreen* will graph the movement of particles in three dimensions, allowing you to manipulate all the strange things that can affect subatomic particles. This is probably the most complex piece of shareware out there, yet its interface is surprisingly simple, so even the most computer illiterate nerd can have a go.



#### Math! Dear God, No!

Well, math is inescapable. But fret not, gentle reader, we have programs to help you cope with your utter inability to reliably add 2 and 2. Pedagogy Software is kind enough to grace us with *Poly*, a fun program that breaks geometry down to a kindergartener's level.

This is a bit of hyperbole, but when you give someone a chance to do math with a pair of scissors and a tube of paste, what five-year-old wouldn't jump at the chance? *Poly* is an assembly of over 100 polyhedrons, and each one of them can be printed in cut-out-ready form. Why you'd need to have a paper model of a bilunabirotundra is beyond me, but we don't pass judgment here.

If your math skills are up to date, but



you're having trouble passing on your wisdom to your kids, you might want to look at Robert Shenk's *Be Fruitful and Multiply*. As the name infers, *Be Fruitful and Multiply* uses an apples-and-oranges approach to multiplication. It's small, simple, and will run on any Mac. While it may not be the prettiest of programs, it's probably the simplest, and will hammer home the concept of multiplication. And since nine out of ten teachers agree that drilling is the easiest way to get those multiplication tables down pat, *Be Fruitful and Multiply* is an excellent five minute daily work out for kids. Each multiplication question takes forms such as: "If 5 dogs have 4 puppies each, how many puppies are there?" Even the most stubborn of math haters will soon understand the concepts.

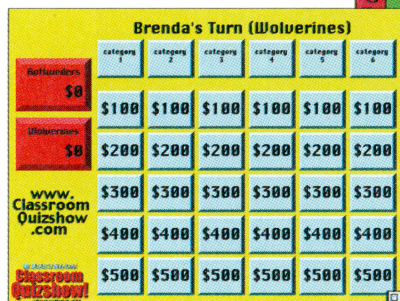
For those kids slightly higher up in the mathematics food chain, there's *Jamit's Fractions* from Jamit Software. This HTML-based program will run in your Web browser and gives you a place to teach your kids about fractions. It could easily double as a textbook for the home-schooler who needs to impress upon the young 'uns the sticky wicket that is fractions. The info in this string of HTML documents helps break down the ever-hard-to-describe halves and quarters into easy-to-understand English. If you register it, you'll be able to run a few tests in your browser to make sure your kids comprehend all that you've shown them.

### Teacher's Cramp

Since Macs are so prolific in the education world, I'm sure many a teacher out there has wished that he or she could use those Macs to help out a little in the classroom. Fortunately, there's Steve McNutt's *Classroom Quizshow* ([www.classroomquizshow.com](http://www.classroomquizshow.com)). Thanks to McNutt, teachers can jump into Alex Trebek's shoes and moderate a classroom game of *Jeopardy*. Teachers can configure all the questions so the program will work for any subject, from French to history. All you'll need is a copy of the game and a prominently placed Mac to serve as the question board and buzzer station. Divide up your class into teams, pick one leader

from each side to push the buzzer, and you're all set. This is a great way to help a whole class review for a test.

Of course, Mr. McNutt doesn't have a monopoly on

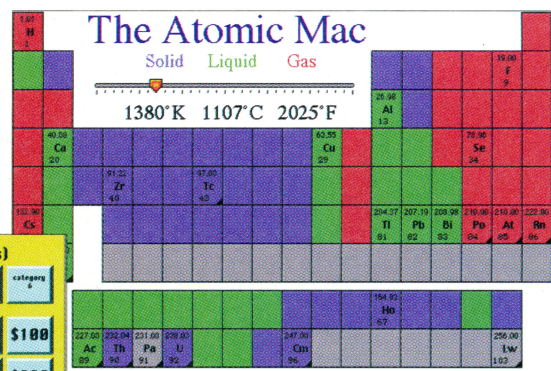


the classroom quiz market. 1/2 Baked Software's *Hot Potatoes* ([web.uvic.ca/langecen](http://web.uvic.ca/langecen)) is a top-flight program for creating tests. You can make your standard multiple-choice or short-answer questions, or you can get funky with crossword puzzles, word jumbles, and word matching. With a copy of *Hot Potatoes*, any teacher can turn a test into a work of art. And who knows — your students might actually start to enjoy those pop quizzes. Well, probably not, but you gotta have goals.

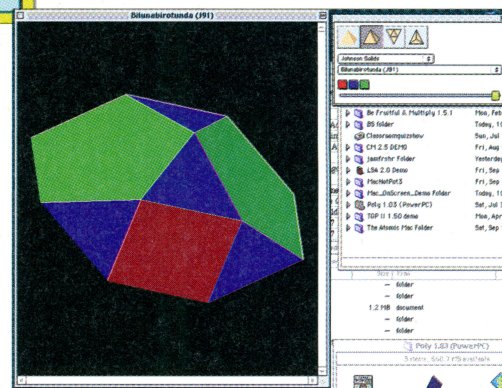
And if you're having trouble keeping track of all those tests, you might want to pick up a copy of *Teacher's Grading Program* from John Lindal. It's a quick-and-dirty way to crunch those GPAs into easily rankable numbers. The demo version is a tad limited, but the full version can track a whole gaggle of students. If your classes need a little more horsepower, you might want to check out *Class Master* from William K. Bradford. Not only will it keep track of your students' grades, but it will also watch his or her attendance as well — a must in any high school.

### Oh Great, More Lawyers

If you're working on your law degree, you know that the bar exam could be your undoing. With a copy of *Law Student Advantage* from Web Pope, however, you'll be a leg up on all those arcane laws. Everything from cross-referenced federal regulations to flashcards will help you memorize just when it was that it became



**Pretty Colors!** A running theme amongst educational shareware seems to be bright, friendly colors. In fact, in *Poly*, below, you can use any color in the rainbow to highlight your polyhedrons.



illegal to have an ice cream cone in your back pocket. This is a must have for anyone working on getting their degree or their license.

If you want to be a lawyer (and who doesn't?) you'll definitely need to know how to type. If you're all thumbs when it comes to the keyboard, you need a copy of *Ten Thumbs Typing Tutor* from Cross Worlds Computing. Your fingers will be flying across the keyboard as you work on memorizing a standard QWERTY or Dvorak keyboard layout. Each lesson can be custom configured to help you reach your word-per-minute goals. After a few weeks of practicing, you'll be a regular Mavis Beacon, the first typing teacher. Now don't all jump at once; I know we all want to be like Mavis Beacon.

And this is by no means all that's out there. You can learn all manner of new things from shareware, not the least of which is generosity. So why not just go out and pay those shareware fees? All of these great programs and more can be found on our Website at [www.machome.com/download](http://www.machome.com/download). Stop by and start learning, darn it! **NIH**



## Y-O-D-A Yoda!

**L**ucas Learning has just released *Yoda's Challenge*, a nifty little number aimed at kids aged six to eight. With a stack of fun activities, *Yoda's Challenge* should keep your Jedi-in-training busy for hours. Kids can play music along with the cantina band, race with Jar Jar Binks, unscramble "tangrams," and do all sorts of other cool stuff. You'll want to fire up the old inkjet too, because you'll be able to print out pictures to color and certificates that show your Jedi accomplishments. *Yoda's Challenge* retails at \$30 and covers a wide variety of educational subjects — everything from vocabulary and grammar to time and spatial concepts. This is one challenge kids won't mind accepting. Lucas Learning, [www.lucaslearning.com](http://www.lucaslearning.com), 888-532-4263

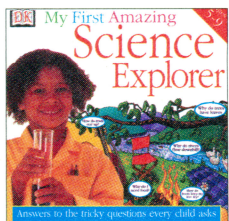


## Not Your Type

**W**ant your kids to learn to type without having to worry about Coke spills on your keyboard? Take a look at Greystone Digital's new Big Key Plus line of keyboards. With four configurations to choose from, you'll have your youngsters moving along at 30 words per minute in no time. You can choose from colored or white keys and the standard *qwerty* or *abc* layout. Either way, your keyboard will be safe from messes and spills, and your kids won't have to stare blankly at a confusing array of bizarre keys. The large well-marked keys make it easy for kids to find the letters they're looking for without having to hunt and peck. And best of all, you won't have to worry about your young 'uns getting carpal-tunnel syndrome. \$135, Greystone Digital, [www.bigkeys.com](http://www.bigkeys.com), 800-249-5397

## Little Tiny Rocket Scientists

**D**K Interactive Learning has finally released the nifty *My First Amazing Science Explorer*, an educational title that helps kids discover the science behind everyday events. This will surely take a load off of parents' minds, as they won't be put on the spot by such questions as "Why are bubbles round?" Rather than making up something that sounds plausible, and thus leaving your kids misdirected and disillusioned, you'd do better to pop this title in the old iMac and show your tykes how things really work. With a copy of this floating around, kids will have the upper hand when it comes to the questions that keep us awake at night. I know I simply can't go to sleep without first understanding how plants



drink. Okay, so maybe I can, but every parent knows that kids ask the darndest questions.

If your kids want to keep a log of all their new discoveries and bizarre questions, they can use *My First Amazing Diary*. (Why all this stuff is amazing, I'm not quite sure.) Everyone knows that the best way to become a good writer is to practice, practice, practice. So what better way to practice early writing skills than by letting your kids write their secret confessions every day? With *My First Amazing Diary*, even preschoolers can get in on the fun by using pictures to show their daily activities. Eventually, they can step up to writing when they start learning how to type. Just be sure not to peek. I'm sure little Johnny wouldn't be too happy if he found you leafing through his turgid life story.

\$30, DK Interactive Learning, [www.dk.com](http://www.dk.com), 800-352-6651

## Everyone's Favorite. . . uh. . .

**A**rthur's back with a vengeance. The Learning Company is bringing the lovable little ... uh ... gerbil? onto Macintoshes everywhere with the release of three new Arthur titles. Ever since *DW, the Picky Eater*, Arthur has had a warm place in our hearts. *Arthur's Kindergarten* features activities for those newly indoctrinated into the world of school. Kids must help Arthur rebuild his tree house, which has been destroyed in a terrible storm. In *Arthur's First Grade*, kids follow Arthur as he works towards winning a contest on his favorite TV show, *Bionic Bunny*. Does that mean he's a rabbit? Finally, *Arthur's Second Grade* focuses on "Take your kids to work day." Arthur and his friends will get to see exactly what their parents are doing all day while they're at school. All this still doesn't answer the \$64 question, however. What in the heck is Arthur, anyway? Popular mythology calls him an aardvark, but his snout just isn't long enough to suck ants out of logs. Of course, he may have developed a less-unwieldy face to accommodate all those cheeseburgers and french fries. \$20, The Learning Company, [www.learningco.com](http://www.learningco.com), 510-792-2101



**USB**



- *DualPort USB™*
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- *IceView™ Hub w/ USB Loadmeter*
- *USB Performance Package™*
- *InterView™ A/V Capture for USB*

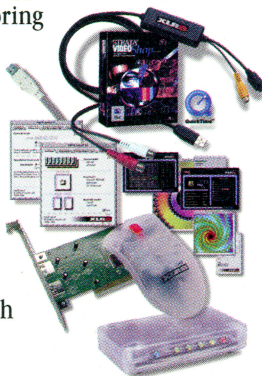
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**USB is the new, state-of-the-art standard for Apple connectivity.** XLR8 uses this new standard to bring cool functions, and more fun to your Mac. From multi-functional mousing to A/V capture and internet video, XLR8 combines the best USB solutions for you.

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www.lucaslearning.com

Ages 9 and up

It's rare that I enjoy an educational title. I'll admit it: some of them, while informative, are tooth-grindingly hard to take. When you consider that most educational titles are aimed at children with short attention spans and a love for saccharine-sweet bunny rabbits, it's easy to understand how a hard-core gamer like myself could be daunted by reviewing them (I am deeply disturbed by Teletubbies). But when *Pit Droids* found its way onto my desk, I was definitely delighted. Not since *The Incredible Machine* has a puzzle game so twisted my brain into tight knots.

The game focuses on the exploits of a herd of pit droids, the little two-legged robots that get sucked into the engines of the pod racers in *Star Wars: Episode One*. While they may seem cute and cuddly, they're not so lovable when they come in stacks of 48. In all, you must guide 144 pit droids to the pod-racing arena by leading them

through desert areas on the planet Tatooine. Each area takes the form of a puzzle, and since you get droids in chunks of 48 at a time, you have to complete a few puzzles in each area

in order to get all 144 to the end. Of course, a lot of those droids will get smashed into scrap metal along the way, but that's why you start out with over 300. Boy, that's a lot of cute little robots!

Of course, once these guys start smacking into each other, you'll find them less lovable. They are really dumb. At the start of each level, pit droids stream out of an entrance and keep coming until the last one escapes or is trashed. So, along the way, you must place instructions for the droids to follow. These instructions come in the form of floor tiles that you place at any time during the puzzle. Instructions can be as specific as

"Red pit droids, turn left," or, "Every fourth droid head right." Most of the puzzles involve sorting different types of droids, arranging them by color or by what type of tool they're carrying. And if you lose one-too-many droids while trying to get the little moron with the ladder to go into the exit, you can start the stream of droids over again, with no harm done.

*Pit Droids* has some excellent puzzles. Most are well conceived and seem to be labors of love. The small movies that reward you after every few levels capture the feeling of the game quite well. The droids are trampled, they hit each other with ladders, they play chess, and they engage in all sorts of other slapstick clichés. On the sound and music front, *Pit Droids* can wrestle with the best of them, especially with its original soundtrack. These are the first songs I've heard in a while that would fit right into a "*Star Wars*" cantina. The graphics are a great treat for the eyes, but the trade-off is a

200MB installation and some relatively heavy hardware requirements. While the game will run fine on any Mac made in the last three years, you'd do well to have a G3.

*Pit Droids* is one of those rare gems that will strain your brain and leave you coming

back for more. Had it been released a year or so ago, it might have been called a game. Indeed, it could easily stand on its own in the rapidly shrinking puzzle market. But *Pit*

*Droids'* combination of logic- and math-based puzzles keep it from being strictly considered a game. While it presents some complex conundrums, there's nothing that can't be solved with simple logic. It's a wonderful title to add to your library, and you might find yourself playing a few rounds when the kids are away from the com-

puter. And don't worry; there's nothing here to make you nauseous (which sure can't be said of the Teletubbies).

— Alex Handy





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**[www.gojamcam.com](http://www.gojamcam.com)**





## Disney's Magic Artist Studio

★★★★☆

\$29.99, Disney Interactive

800-900-9234

www.disneyinteractive.com

All ages

*Disney's Magic Artist Studio* may inspire kids toward a career in computer graphics. But they'll have to be patient kids — with all its tools and tool modifiers, styles and styler options, mastery of the software's extensive capabilities requires weeks of practice and a huge dose of humility. Though worth the struggle, the program can be unforgiving.

The software's Chalk Talk interactive workshops are supposed to be five lessons in animation, not humiliation, but the tracing is difficult with no way to erase a mis-scrawled line. The outcome can be discouraging. Similarly, in the tool drawer of the CD-ROM's Creation Area, I could not erase

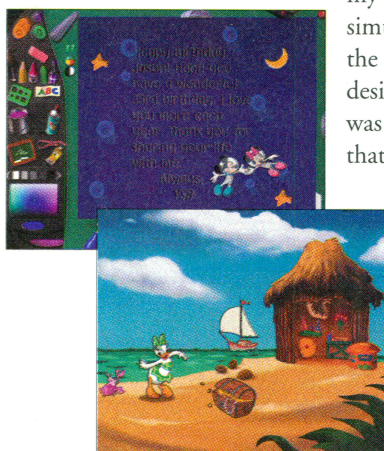
my character's hat without simultaneously rubbing out the checkered background I designed. The Undo function was somewhat more helpful in that it made mistakes disappear without leaving eraser skid marks, but only if selected immediately after the mistake was made.

Filling the blank canvas became much more compelling when I restricted my left brain

and began spontaneously generating abstract art with the studio's dozens of colored markers, spray paints, paint brushes, crayons, and pencils. The imaginative image-spray function brought 3D butterflies, ladybugs, roses, slugs, frogs, and spiders onto the canvas, where they flew, slid, hopped, crawled, and budded before settling down permanently on the page. As evidenced in the Under the Hood gallery where my "artwork" was saved, I could not get enough of the sound of the butterflies' wings flapping.

The software's most glorious magic resides in the stamp drawer, which is totally Disney. Would-be artists can choose from 300 stamps, categorized by theme — circus stamps include elephants and Mickey Mouse in ringleader garb; space stamps offer Goofy the astronaut and a cute yellow alien; and Broadway stamps render a chorus line of pigeons and Minnie Mouse, dressed to the nines — and place them in your artwork. They spring to life with just one click. Few things are more enjoyable than watching these animations shake and shimmy on backdrops (a city street, a haunted house, a desert island) of your choosing. It is the best of color-form fun, only far, far more engaging.

— Amy Shafron



## Blue's Treasure Hunt

★★★★★

\$30, Humongous Entertainment

800-499-8386

www.humongous.com

Ages 3 to 6

*Blue's Treasure Hunt* caters to the inherent trait in children: curiosity. This game is so wildly entertaining and multi-layered that from the time the kiddies sign in until they leave the Land of Great Discovery, they'll have a ball.

Before players are granted entrance into this Land, they've got a lot of work — I mean, play — to do. Prompted by host Steve Burns and tail-wagging cutie Blue, they must first explore and complete three Treasure Hunt Pathways. The goal of each pathway is to discover the most treasured thing of three different characters. Along the way, locations such as Steve's house, the park, and a school provide countless items to click

on: flowers bloom, toothbrushes dance, and clouds change form.

The most appealing aspect of the game is that kids must help out Blue's friends in order to succeed. They read and rhyme while telling bedtime stories with Mr. Salt and Mrs. Pepper. They count and problem-solve in Mary's garden while searching for numbers. They sequence and sort as they help Magenta arrange photos in chronological order. Players will remain gleeful throughout because there's no pressure and there's not a trace of testing going on.

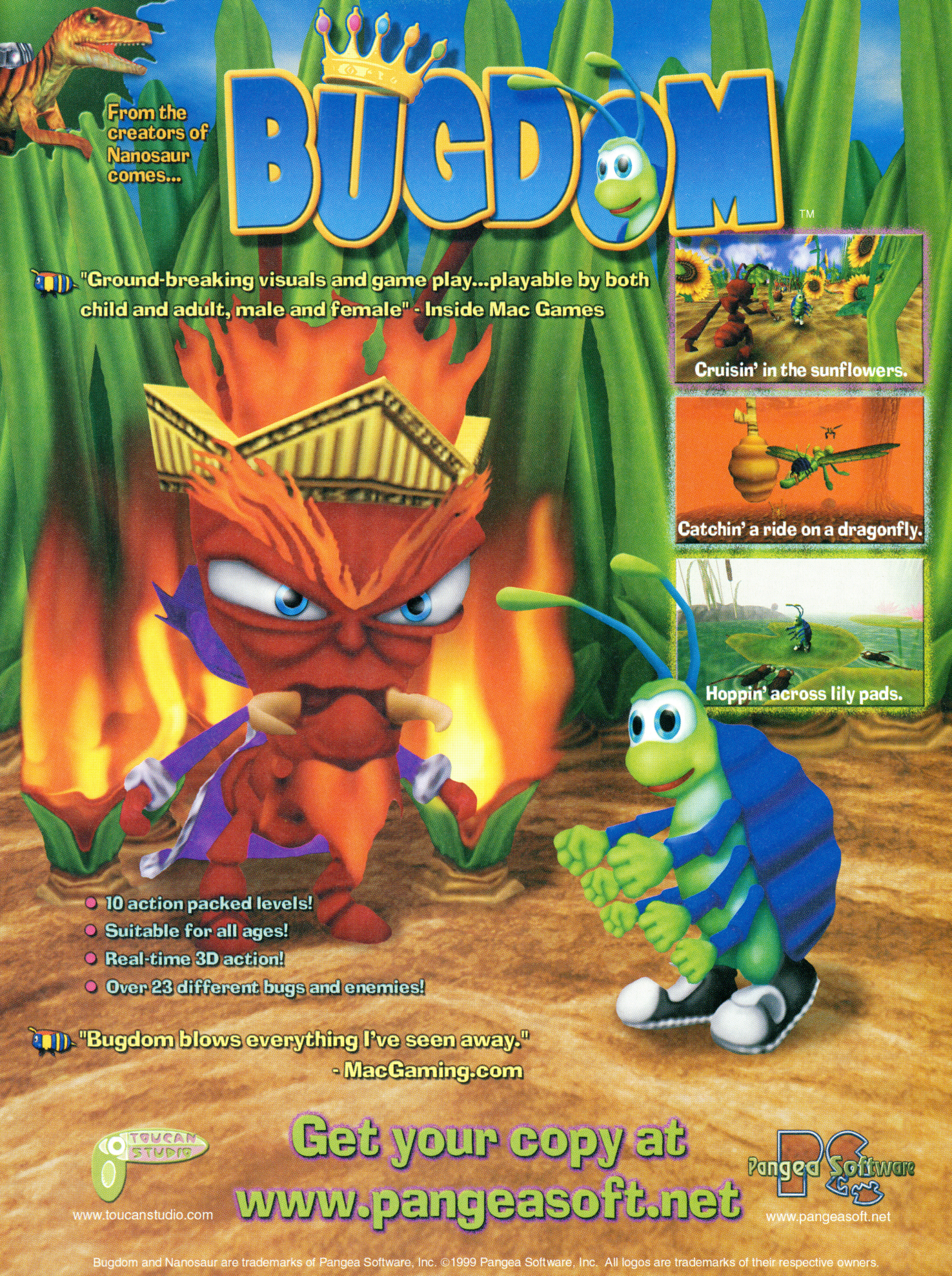
Kids may quit at any time without losing their progress toward the Land of Great Discovery. The overall journey may take hours, but it's worth it. At the end of the rainbow, an empty yet inviting landscape awaits. On it, kids can create their very own worlds and customize their own computer game.

There is so much going on here; this adventure doesn't miss a trick. Even when youngsters know what they're looking for (the clues don't change), they'll keep playing. After all, that's what they're meant to do.

— Carolyn Blackburn





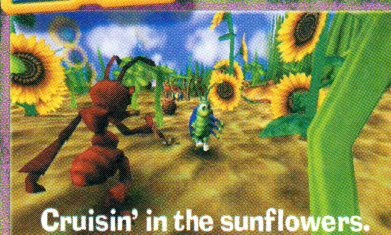


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## Share and Share Alike

### Shareware and the Modern Mac

**W**ith all the wild ideas and massive funding in the modern gaming market, it's a wonder there are still any intrepid programmers out there chugging away at their own labors of love. The world of shareware has always been filled with plenty of games, but as time passes and computers get more powerful, shareware has become much more sophisticated and entertaining.

No longer the domain of code crunchers trying to replicate their favorite arcade games of years past, these days shareware games cover all manner of topics and genres.

Any article on shareware games on the Mac would be remiss without mentioning Ambrosia, Freeverse, and Spider Web Software. Along with some smaller companies, such as Green Dragon, Fantasoftware, and Monkey Farm, these groups built the Macintosh shareware community into what it is today. But by now, you've probably heard of *Escape Velocity*, *Jared*, and *Exile*. Let's instead turn our attention toward the unknown games, the innovative games, the old and the new, and the ones you've probably never seen or heard of, let alone played.

#### Ancient Stories

No commercial game company would have published *Lost Souls* from Spider Web Software ([www.spidweb.com](http://www.spidweb.com)); it's far too cerebral. The game is as simple as chess and requires as much skill. You must destroy your foes by building and managing an army of tokens. Each

token can move in any direction, but it can take only a few steps at a time.

There are no hit points or special powers; whichever piece attacks first will win a battle. The strategy comes in not allowing your opponent to get within striking distance of your cherished knights or archers while trying to control as much territory as possible.

This is one of those devilishly addictive games that you'll keep playing without quite knowing why.

If you've never played *Realmz* before, you're missing out on one of the Mac's best-kept secrets. Written by the one-horse company Fantasoftware ([www.fantasoft.com](http://www.fantasoft.com)), *Realmz* is the gift that keeps on giving. In the tradition of *Dungeons and Dragons*, *Realmz* places you in a world

of elves, dwarves, and monsters. You form a party of intrepid adventurers and set out to slay the dragon, gorgon, or what-have-you. If you defeat the \$25 game, you need only pop over to Fantasoftware's Website to download third-party adventures at around \$10 a pop. And these adventures ain't no sissy addons; they come with new maps, characters, monsters, and quests. Each adventure is completely different from the rest

and offers a new gaming experience for you and your party of brave adventurers. And, if you order more than \$13 worth of software from Fantasoftware before the year 2000 and mention *MacHome*, you'll get *Prelude to Pestilence*, the wonderful *Realmz* add-on, for free!

*TaskMaker* from Storm Impact is a rare gem in the world of shareware

role-playing games. Featuring a massive world and one of the best tutorials ever, *TaskMaker* and its sequel, *Tomb of the TaskMaker*, feature challenging gameplay and a vast variety of things to do and places to explore. You can venture forth to fight rampaging monsters, or explore the king's castle while stealing his loyal subjects' personal belongings. *TaskMaker* shines thanks to its utter lack of rules.





You are taught all the moves you need to succeed and are sent off to do whatever you please. Of course, as the name implies, there's no shortage of quests to take on when you grow weary of stealing people's shoes (an activity I've spent way too much time on; you can do it in Ambrosia's *Cythera* too).

### Useless? Yes. Fun? Yes.

Of course, if shoe stealing isn't your cup of tea, you might prefer a trip to the movies. With *SimCinema*, by Shannon Schroeder, you can put virtual butts in virtual seats. Ever wanted to be a big-shot Hollywood producer? *SimCinema* is your dream machine. Pick a movie genre, write a short description, and then pitch it to every major studio in Hollywood. Choose your studio and hire directors, actors, special-effects houses, and more. You're in charge and see the movie through from beginning to end. Once your film is completed, run some TV ads and keep those box office receipts up. This is one that'll keep you coming back for one more film. And best of all, it's only 10 bucks!

But sometimes, there are programs that are simply priceless. In the traditions of Freeverse's *Jared* (if you haven't seen *Jared* yet, download it now from our Website; it's a must-have.), *MacHome*'s corporate headquarters has been invaded by a gaggle of ducks recently. Bob Nystrom's *duck*, to be exact. *duck* is the perfect surprise to stick in someone's Startup Items folder when they're not looking. It's on our Website, so make sure you check it out. It's truly a sight to behold.

What shareware list could be complete without *Bolo* ([www.lgm.com/bolo](http://www.lgm.com/bolo))? It's the granddaddy of all Mac shareware, and to this day, 12 years after its initial release, it still has a loyal following. Be forewarned — if you've not seen *Bolo* before, it will not impress you at first. It's a simple 2D game that uses plain graphics and simple sounds. Gameplay revolves around you and your tank. You must fight your way around various islands, destroying other tanks and pillboxes along the way. But those other tanks and pillboxes are pretty nasty, so you'll need a little help. That's why you

can harvest trees and build boats, roads, and mines to keep out the bad guys. Once you've captured a pillbox (no small feat), you can use it to defend your base and keep the opposition at bay.

*Bolo*'s long life can be attributed to many things, not the least of which is its diverse network play. A whole slew of Mac users can *Bolo* each other's guts out over TCP/IP or AppleTalk, making it the perfect game for a lonely night at work. Of course, what's the fun of fighting



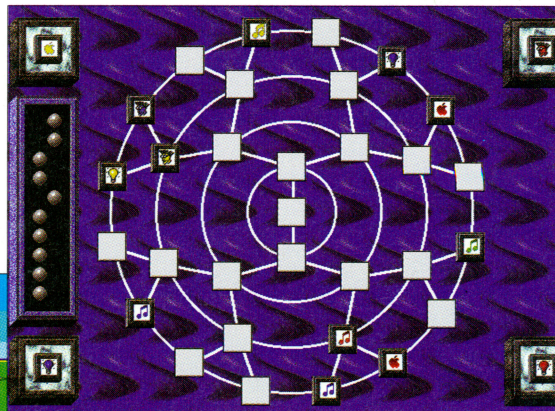
against your friends on the same stale old battlefields? *Bolo* has a simple and powerful map-making utility, and a quick venture online will net you thousands of user-made maps. You can fight in venues ranging from Washington DC to the open plains of Nebraska. And the best part of all? *Bolo* and its add-ons are completely free!

### Icons and Interstellar War

*HotSpot*, by Mark Pilgrim, is a brain destroyer. Using five icons in five colors, you must create a chain of parents and children. For example, if you place a green light bulb next to a red apple, you need to place either a green apple or a red light bulb next to them. Sound easy? Not when you only have four icons to choose from at a time, and all your parent/child chains need to connect to one another. *HotSpot* is possibly the hardest puzzle game I've ever encountered. This is one that'll keep you up all night.

Puzzle games not your thing? How about orbital bombardment and massive

nuclear retaliation? Catfish Software's *Starbound II* ([www.catfish-software.com](http://www.catfish-software.com)) is a massive galactic space opera, and you're the main character. In the tradition of *Masters of Orion II*, *Starbound II* puts you in control of a race of aliens (you can choose from eight in the full version) who have recently discovered



**Colorful, eh?** Shareware games come in all shapes and sizes. Even though some of them are old and no longer supported, they can still be a hoot.

the secret of faster-than-light travel. So, naturally, there are going to be some conflicts of massive proportions. *Starbound* comes with only three races, but thanks to the foresight of Catfish Software, you can add in new races later on and even create your own custom lifeforms. But you'll have to register first; \$20 is the ticket to ride this roller coaster.

### Arcadia

Arcade games have always found a home in shareware. Some of these games are just too simple and unabashedly mindless to find a place in the mainstream commercial market. One such game is *Prometheus*, from Quarter Note Software. Actually a direct knock-off of the arcade classic *Qix*, *Prometheus* is an example of abstract gaming done right. You control a small speck of light on the outside of a square. Inside the square is a rotating wave of colored lines that bounces around from wall to wall. You must move out into the square and section off chunks of it as your own — all while avoiding the flowing wave of lines. Each level has a percent-based goal, and





**Nice Vintage.** While some games revel in flashy graphics, shareware games tend to be all gameplay. Shareware can be like a fine wine: The label ain't all there is to it.



when you've blocked off enough of a level, you progress. While getting 50% of a level is a breeze, sectioning off 90% is easier said than done. Unfortunately, the game is not easy to describe, so do yourself a favor and try it for a few moments. It's on our disc and is an excellent replacement for solitaire.

Of course, some arcade games require a bit more use of the old gray matter. *Boom!* from Factor Software is a nifty little workout for your fingers and your mind. If you've ever seen the game *Bomber Man* on the old Nintendo 8-bit or Super Nintendo game systems, you know what *Boom!* is about. You and up to four of your friends are pyromaniacs caught in a maze of baddies. You must use your bombs to blast through obstacles and enemies while avoiding the backlash of an explosion. Watch out for those power-ups; some can increase the power of your bombs, which means you'll have to run farther to escape the blast. This one's great for parties.

And speaking of party games, you can't have a network party without a copy of *Greebles* from Stairways Shareware. This little four-player num-

ber lets you play with any combination of players and computers, from one player at four computers to four players at one computer. Its simplicity makes it addictive, as players try to crush bugs with tiles while escaping the dreaded rebound. Each player controls a small tank that can

push blocks in any direction. If the pushed blocks don't crush a bad-die, however, they bounce back and squish any-

one in the way. With over 100 levels and a wonderful soundtrack, *Greebles* is a must-have for anyone with bored friends.

But for some real hectic action, you'll have to try *Boogaloopers* from Stick Man Games ([www.smgames.com](http://www.smgames.com)). This enigmatically titled game is as simple as they come: you need only use your mouse to play. You control a shining point on a 2D plane. As you move, you leave a tail of light behind you. Surround objects on all sides with your tail to collect them. Of course, this is quite easy at first, but as the game progresses, you'll be hard pressed to stay alive long enough to capture that space ship. This one is highly recommended.

### Nectar of the Gods

Now we all know that Ambrosia ([www.ambrosiasw.com](http://www.ambrosiasw.com)) rules the Macintosh shareware market. Freeverse's president ([www.freeverse.com](http://www.freeverse.com)) Ian Lynch Smith refers to Ambrosia as his own personal Microsoft. But Ambrosia's games are just too good to warrant that comparison. We could write for days about *Cythera* or *Escape Velocity*, two of Ambrosia's better titles, but there's so much more to the Ambrosia mystique. Ambrosia makes games that defy description, and they must be experienced to be understood. Take *Barrack* for example. While most would see *Qix* or *Prometheus* as the be-all and end-all of territory capture games, along comes Ambrosia with a game that turns the

genre on its ear. *Barrack* adds all sorts of new elements to a genre that could be considered the most abstract and hard to describe. *Barrack* is a highly addictive game that will suck you right in, shake you violently, and spit you back out with a dazed look on your face.

Then there's *Harry the Handsome Executive*, a game that even Ambrosia has trouble explaining. You are Harry, the handsome executive, whose feet shall never be besmirched by the floor. Harry spends the entire game in his swivel chair, scooting around backwards by pushing off of desks and walls in ways you've only dreamed of. Using his masterful skills with the roly chair, Harry must find his way to the mailroom, evade the evil HR people, and search for the elusive corner office. Of course, coffee and donuts help a lot, especially when the guy across the hall is throwing America Online disks at you.

### Your Fair Share

If you find yourself turned off by the overabundance of blood and guts in today's mainstream games, you'll definitely want to check out these games. They're all available on our Website or on Lazerworks' wonderful two-disc set *All the Best Mac Games 2000*. If you need your gaming fix right now, you can get all of these games and more at our Website, [www.machome.com/download](http://www.machome.com/download). You'll laugh. You'll cry. It's better than *Cats*. **MII**

## References

### MacHome Shareware

[www.machome.com/download](http://www.machome.com/download)

### Ambrosia

[www.ambrosiasw.com](http://www.ambrosiasw.com)

### Freeverse

[www.freeverse.com](http://www.freeverse.com)

### Lazerworks

[www.lazerworks.com](http://www.lazerworks.com)

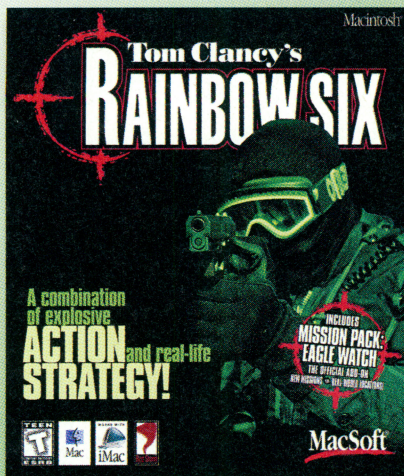
### Spider Web

[www.spidweb.com](http://www.spidweb.com)

### Fantasoft

[www.fantasoft.com](http://www.fantasoft.com)

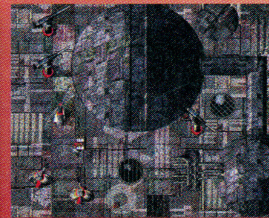




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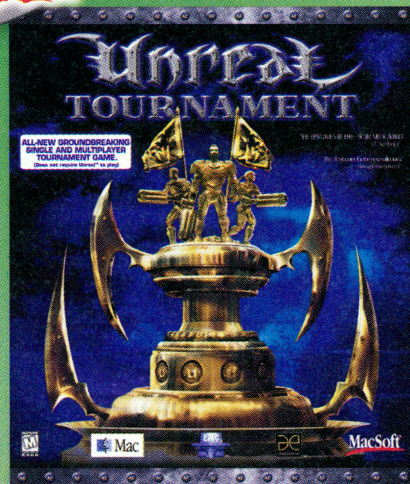
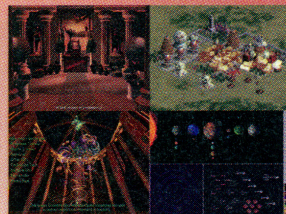
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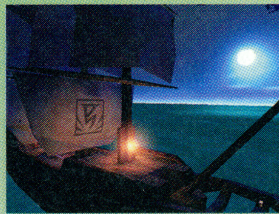
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## MacSoft Is Board

**B**oard gaming is a lost art. When was the last time you pulled out the old *Life* board and spun the wheel? How long has it been since you last touched a *Scrabble* chip? Well, if Hasbro Interactive and MacSoft have anything to say about it, you'll be playing a lot more board games on your Mac. In just a few more months, Hasbro will be releasing *Monopoly* for the Mac and PC. Better dust off your hotels and get ready to corner the market again, because this time around you'll have the run of 15 different board layouts and an obligation to take your real estate gamble online to beat the snot out of some PC geeks. Just don't get too out of hand, or it's off to jail: Do not pass Go, do not collect \$200 ...

But that's not all, folks! MacSoft is also working on a Mac version of *Mechwarrior 3*. This massive PC hit is the long-awaited sequel to the universally praised *Mechwarrior 2* (duh!). The game focuses on the exploits of your clan on a lone planet amidst a large interstellar conflict. You'll have to customize your mechs for optimum performance, as the game features excellent multiplayer action. No word yet on a release date, but rest assured, the game will not fall victim to the *Total Annihilation* syndrome, which delayed that title for over a year.

MacSoft, 800-229-2714, [www.wizworks.com/macsoft](http://www.wizworks.com/macsoft)

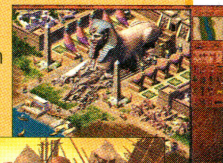
## Dy-no-mite!

**W**ith all the hoopla surrounding the recent announcement of Voodoo 3 support for the Mac, we were quite pleased to see that nVidia has decided to bring its TNT cards home as well. Recently, the Santa Clara-based company hired a Macintosh programmer to start writing drivers for its cards. For gamers, this is excellent news: the Riva TNT2 cards are absolutely amazing and easily give 3DFX and ATI runs for their money. Also, nVidia has recently released the newest member of its graphics card line, the GeForce 256. The GeForce 256 is being marketed as the first GPU (graphics processing unit) and is said to be light years ahead of anything else on the market. Let's hope we'll be able to tell you in the next issue that this is true.

nVidia, 408-615-2500, [www.nvidia.com](http://www.nvidia.com)

## Sierra Wraps Up Pharaoh

**S**o you've gotten a copy of Sierra's amazing *Caesar III* and you've played it until your ears turned mauve. What now? Step up to the podium and give a big "Howdy" to the next chapter in the ancient city-building empire: *Pharaoh*. In this ancient Egyptian simulator, you'll be the supreme ruler of a town of Egyptians. You'll have to build all manner of



ancient structures, such as the Sphinx or the Library at Alexandria. Of course you'll have to build housing, military outposts, wells, and all the other things necessary to keep a town running. But the real charm here is your reward for succeeding: when you die, everyone who works for you will be piled into the pyramid with you. Now that's job security! As the slogan goes, you can be buried with your hairless cat if you want.

\$40, Sierra, 800-757-7707

[www.sierra.com](http://www.sierra.com)

## Spot the 10

**L**ast month we listed the top 10 Mac games of all time. But that's just not good enough for us. We want to know what you think. What's your favorite game of all time? Got your own top 10? How about your own top three? We're flexible on this. Send us your list so we can find out just what our readers like! If all goes well, we'll be doing a Readers' Top 10 of All Time at a later date. So stand up and be heard. Are you miffed that *Quake* wasn't on the list? Angry that we left out *Myth*? Send your list of games to [alex@machome.com](mailto:alex@machome.com) with "I'm a List" as the subject.

## You Don't Know Paul!

**D**o you miss Pee-wee Herman? Of course you do. We all do. The loss of Pee-wee's Playhouse left us all feeling a little less in touch with our inner children. Fortunately, our old friend Paul Reubens will soon be returning to the one-eyed yak box to host *You Don't Know Jack*, the TV show. We were wondering when he'd be back, as were we wondering when *YDKJ* would make it onto the low-resolution screen. While no network has signed onto the project, we have a feeling someone'll hop onboard soon. While it's nice to see Pee-wee back in action, it is a bit disconcerting to see that every news story on this item including this one mentions Reubens' illicit movie house antics.

Berkeley Systems, [www.berkesys.com](http://www.berkesys.com), 425-644-4343

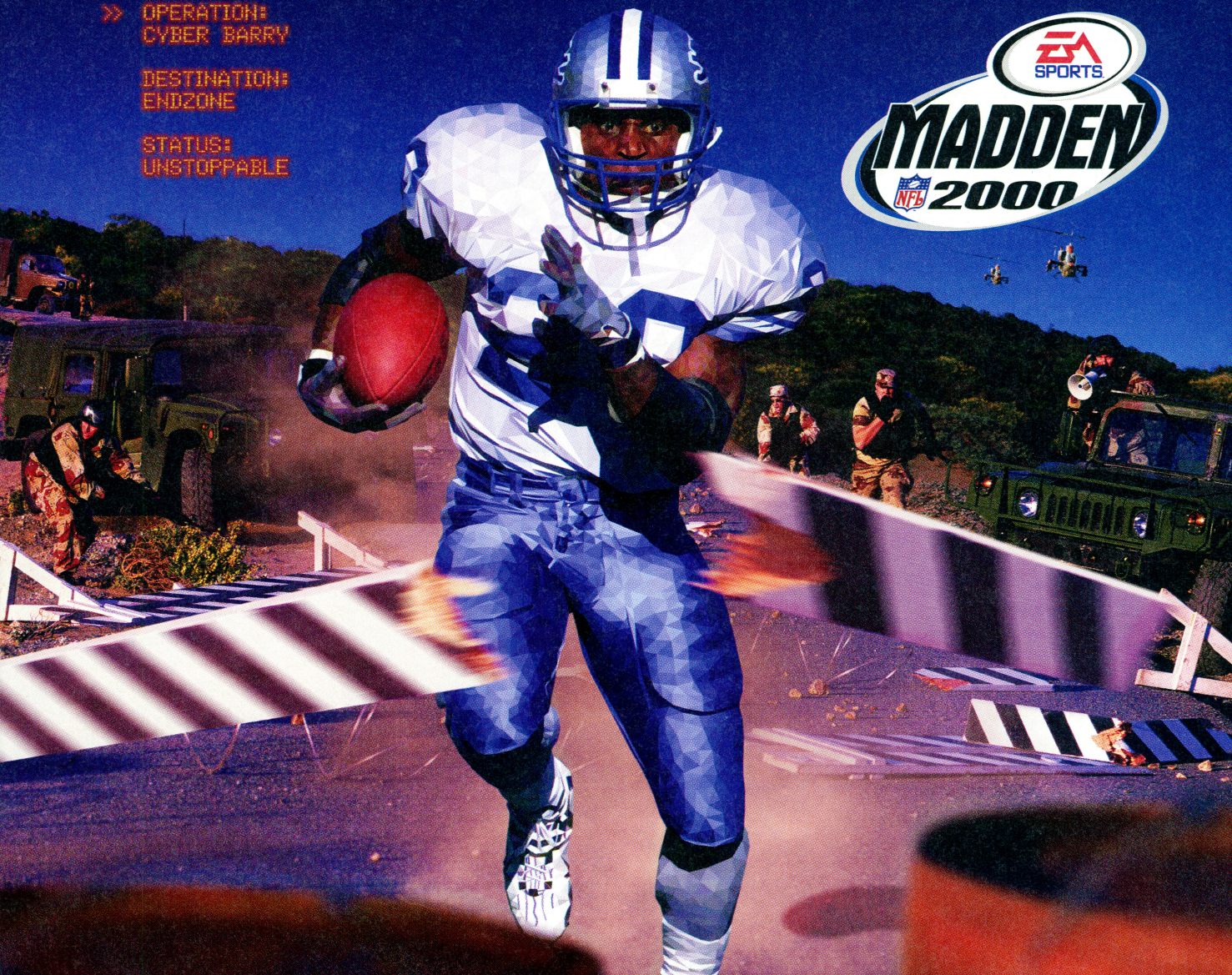


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## Ares 1.10



\$25, Ambrosia

[www.ambrosiasw.com](http://www.ambrosiasw.com)

*Ares* has had a long and challenging career. Originally published by the now missing-in-action Changeling, the game made it onto about five store shelves worldwide. Needless to say, with that kind of distribution, there weren't many copies to be had. Fortunately, good games don't die; they just turn into shareware.

Ambrosia has done an admirable job bringing *Ares* back from the grave. It's a truly unique game and features some extremely innovative ideas and gameplay. You are an officer in the human space navy. You pilot all sorts of different space ships, from heavy cruisers to simple, lightly armed fighters. You also have to keep an eye on your fleet, as you build reinforcements and direct them to attack, defend, or land on enemy planets to take them over. It's a bit like *Armor Alley* in space: You fight and command an army at the same time.

The gameplay is straight out of *Escape Velocity*. Flying your ship feels like playing *Asteroids*, while the interface and story are compelling and immersive. The onboard computer system is your most important piece of equipment. With it,

you can issue commands for other ships, keep track of your shipyards, and listen to incoming messages from fleet command. While using this computer can be a chore during battle, it's a necessary evil.

The game world — or rather, the game universe — is quite vast. There are numerous races of aliens to deal with. Some are benign, while others are simply rude. Each race has distinctive ship styles and technology. While one race may favor machine gun-like mass driver cannons, another might use only energy-based weapons. Ships handle differently according to which race built them, and the styling is quite distinctive from race to race.

*Ares* is not easy. This is a game you'll have to play repeatedly to get it right. Some levels require you to do a lot of life-or-death trial and error. You'll have to take a few suicide runs to scope out enemy positions. The enemies themselves are

remarkably advanced. Enemy ships will warp into your space, attack hard and fast, then jump out of harm's way before you can catch them. Injured ships will limp home rather than stay and fight. You'll be lucky to corner individual ships in combat: The AI (artificial intelligence) likes to gang up on you.

As if that weren't enough, you'll have to manage your fleet, defend your bases, and keep an eye on the enemy all at once. This fast and strenuous gameplay will have you biting your nails to break the tension. This is not a game to relax with. You'll need to have razor-sharp reflexes and a quick wit to succeed. But while some missions may seem overwhelming at first, they become exponentially easier with each attempt. In this respect, *Ares* is a very rewarding game in that practice will almost always make perfect.

If you're not into the single-player experience, *Ares* supports multiplayer play through GameRanger ([www.gameranger.com](http://www.gameranger.com)), the freeware player-matching program that's taken the Mac gaming world by storm. While the GameRanger support is excellent, Net play is very

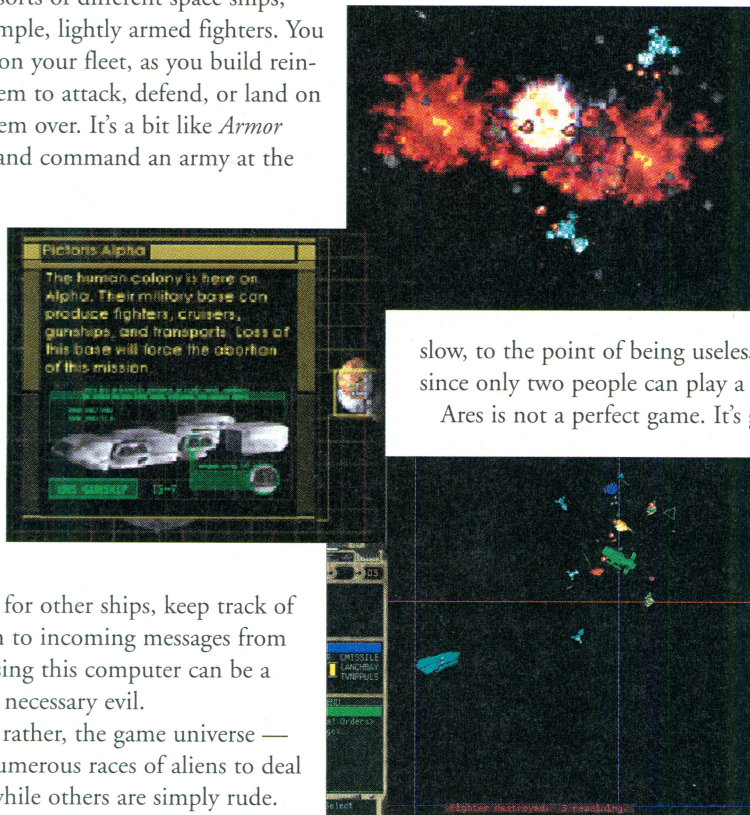
slow, to the point of being useless. This is quite disturbing, since only two people can play a game of *Ares* at once.

*Ares* is not a perfect game. It's got a lot of small annoyances

that hinder the overall flow of the gaming experience. The computer interface could use a lot of work, and you need to use the mouse and keyboard at the same time can, which can be trying. And while good graphics are not always needed to make a good game, *Ares'* two-year-old visuals are a real eyesore at times. The

cutscenes (in-game movies) in particular are grainy and pixilated beyond recognition. But there aren't any bugs, and the storyline is well written and engrossing. *Ares* is definitely worth its price tag, and it will run on darned near any PowerMac you can find. Not a marvel of modern gaming, but not a disappointment either. Take a look at *Ares*; it's a fresh take on a great genre, and the action is fast and furious.

— Alex Handy





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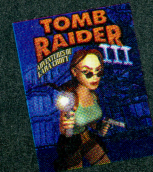


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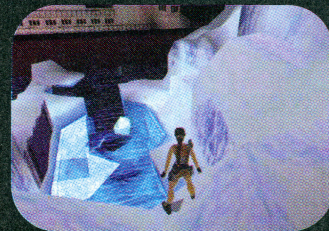
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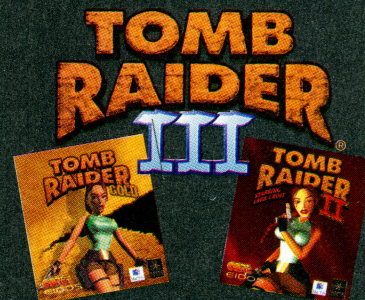


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# Redneck Rampage

🍎 🍌  
\$30, Logicware  
www.logicware.com

Rednecks were all the rage a few years ago. With the advent of *Deer Hunter*, the software industry saw a rush of Redneck-related programs for about six months. Then, the craze dropped off, as industry fads are wont to do. Well, after months of waiting, we Mac buffs can rest easy in the knowledge that we finally have the game that started it all: *Redneck Rampage*. Or can we?

Originally released two years ago for the PC, *Redneck Rampage* was never state of the art. It uses graphics technology from older games like *Duke Nukem 3D* and *Doom*. In this day of fully 3D environments, there is no excuse for ugly 2D in a first-person perspective shooter. While it's understandable that the game took time to translate from PC to Mac and lost a lot of ground as technology moved swiftly around it, that doesn't make the game any prettier. It's bad enough that the game's protagonists are buck-toothed, Ozark refugees, but their enemies are ugly and pixelated to boot. Each character has about three separate movements: shooting at you, walking toward you, and dying. This makes for some repetitive gameplay, as enemies attack you the same way over and over again.



But what makes *Redneck Rampage* truly awful is the lack of configurable controls. There is no control configuration of any kind. The keyboard controls are laid out like *Doom* and *Duke Nukem 3D*, and quite frankly, I don't understand how anyone ever managed to use them. These badly placed keys make a difficult game much harder.

And even if you can figure out the controls, some of them simply don't work. During your travels into hicksville, you'll find moonpies and beer, which can increase your speed and the amount of damage you do. But picking up these power-ups is no guarantee that you'll be able

to eat or drink them: the keys that control those functions rarely work. This game was originally written to run in DOS, and the utter lack of respect it has for the user shines through the glossy Mac exterior. This game belongs on the lawn next to that beat up '75 Chevy on cinder blocks.

— Alex Handy

# Starcraft: Brood War

🍎 🍌 🍌 🍌  
\$29, Blizzard Entertainment  
800-953-7669  
www.blizzard.com

Blizzard has yet to release a mediocre game, much less a poor one. *Starcraft: Brood War* is no exception. Focusing primarily on enhancing gameplay (although the immersive *Starcraft* storyline is furthered somewhat) *Starcraft: Brood War* gives *Starcraft* owners more scenarios and additional units that are intended to create a more eclectic game and lengthen the replayability factor. Are the new features worth the 30 bucks? Without question.

*Starcraft* is one of those games that never really gets old. When you're sitting at your computer on a rainy day, there's nothing better than playing a network game of *Starcraft*. But let's face it; once you've played *Starcraft* long enough, you begin to develop routines. You begin to fall into a comfortable system of annihilating your enemy. For those of you who fit into this category, *Brood War* was made for you.

The most valuable feature that has been added to this installment of the *Starcraft* series is the inclusion of new units. Of particular note is the addition of airborne units to each race. No longer are certain races confined to land-based battles while enemies bomb them from above. The new air-attack units came as a welcome sight to this reviewer's eyes. Realize, however, that in order to play a multi-player game with the new units, your opponents will also need to have *Brood War* installed.

For those of you who prefer the single-player side of *Starcraft*, Blizzard has given us all-new scenarios to conquer. While the difficulty of the new missions is reasonably sufficient, seasoned veterans might find them somewhat simple compared to the hardest scenarios of the core edition of *Starcraft*. Nonetheless, they are a welcome addition and enhance the value of the game.

*Brood War* is a worthy follow-up expansion to *Starcraft* — something few expansion packs are able to achieve. To those of you who enjoy *Starcraft*, you'll find *Brood War* to be a good buy. If you don't already own *Starcraft* itself, head out to your local retailer and go buy it. You won't be sorry.

— Rafi Guroian





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# Rainbow 6



\$40, MacSoft  
800-229-2714

www.wizworks.com/macsoft

I haven't read the book, okay? All of you Tom Clancy freaks out there can scoff at my review for its utter lack of thoroughness, but that won't change matters; I'm still an uneducated, Clancy-ignorant mutant. But I do know a good game when I see it, and *Rainbow 6* is a good game. If my roommate Travis, our Clancy reader, had anything to say about it, *Rainbow 6* would be declared the best game ever.

*Rainbow 6* satisfies a distinct itch in the stagnant world of first-person shooters: the itch for realism. There's no running down halls with rocket launchers, no bad guys taking 50 rounds to the chest and smiling at you. Everything here is as real as it gets. And in the *Eagle Watch* add-on pack (more missions and a new story), included for free, things get even more realistic.

*Rainbow 6* is all about terrorists. You are in charge of the world's most elite anti-terrorist unit. You and your team of eight men and women will rush into the mouth of a terrorist attack and eliminate all ne'er-do-wells. Each mission starts out in a planning phase, during which you lay out your attack movements. Each fire team (a group of armed units) will then follow your plan to the letter, clearing out rooms, rescuing hostages, disarming bombs, and listening to you for their orders.

This ain't no lone gunman game. You'll have to pay attention to your teammates and watch their backs. Normally, you'll have two teams of four soldiers each, with those soldiers within inches of each other, like a SWAT team breaching a house. You'll have to be quick on the trigger too, because terrorists are great shots, and one bullet can easily kill you. Of course, one bullet will drop a terrorist as well, so you're on even footing.

*Rainbow 6* has a few shortcomings, however. The largest problem is that your teammates tend to get in the way. While they're fairly competent when it comes to identifying threats and taking them out, they are absolute morons in close quarters. Also, the game requires a fair amount of horsepower to run, so you'll need a high-end Mac to do the job. But if you like Tom Clancy, you'll love this game.

— Alex Handy

# Fly!



\$49.95, Terminal Reality  
877-463-4263

www.godgames.com

Power Mac required

One of the first things a writer learns is that you can't punch up dull material by adding an exclamation point.

Gamers might keep that in mind. Terminal Reality's new *Fly!* bears the telltale punctuation mark. Uh-oh.

A civilian flight sim (no MIGs or Me109s to shoot down in this one), *Fly!* boasts primarily about its highly detailed 3D terrain, based on real satellite imagery. You can call up 9,500 airports and go just about anywhere in the world. In fact, five city areas — New York, Los Angeles, San Francisco, Dallas-Fort Worth, and Chicago — are even mapped with structures and landmarks, giving you 50,000 square miles of high-resolution ground detail.

Wow. Just think. New York City with all its skyscrapers and teeming traffic lying there below you, just begging you to break the rules and go plowing through a canyon of buildings on Fifth Avenue. And they say they'll be adding more maps. Maybe someday you can fly over your very own home and look down on it.

Sorry. The satellite maps may be good, but they need improvement. Things look great at a distance, but they fuzz up when you fly closer. Take the New York scenario. There are buildings, sure — the World Trade towers, Empire State building, some bridges, and a couple of other structures. But the rest of New York looks like a prairie. Flat. Blurry. And San Francisco is the same. A landmark here and there, with fuzzy ground in between.

We've all seen the *Fly!* ads. Billed as the "Ultimate Flight Simulator for Beginners to Experts," the tag line is: "If Reality Had a Patent, We'd Own It." But how does it really shape up?

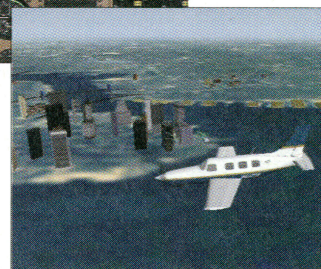
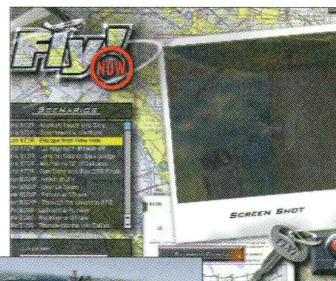
It's a pretty good flying experience, but let's face it, *Fly!* is bland.

No, make that *boring!*

— John Lee



*Rainbow 6* is all about terrorists. You are in charge of the world's most elite anti-terrorist unit. You and your team of eight men and







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# READER'S CHOICE

*Vote for your favorite Mac products!*

You know what we think are the best Mac products, but enough of our yakkin'. Now, we want to know your opinion. Visit the MacHome Website and vote on your favorite Mac hardware and software. The Mac community values your opinions. Alright, you need further incentive? How about this then — we will choose 8 winners at random to win one of the following fabulous prizes: Corel Draw 8, Virtual PC 2.0, or Kensington's Orbit Mouse or Trackball. **Good luck, and cast your vote today!**

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**[www.machome.com/vote.html](http://www.machome.com/vote.html)**

and fill out the easy form. You can pick any Mac products you want. Entries are due by midnight, November 15, 1999

One entry per person — we know who you are. Winners will be chosen randomly from all completed entries. Responses are confidential, and your name is used only for contest drawing eligibility. Prize winners will be notified by phone and mail by December 15, 1999. Prize winners will be announced in the February 2000 issue of MacHome. Employees of MacHome are not eligible to enter. If you do not have Internet access, you may send a S.A.S.E. to MacHome, 703 Market St., Suite 535, San Francisco, CA 94103 for a ballot.



## Building Your Office, Part II

### Creating an Ideal Environment for Working at Home

Last month we discussed purchasing a desk and a chair, the first steps in building a home office for your new Macintosh. This month we take a look at the more subtle aspects of creating a comfortable environment for you and your computer.

#### Lighting (Natural)

The room you select as an office may have large windows, or the windows may be positioned so that the sun shines in the room most of the day. Since the glass surface of your Macintosh display is rather reflective, heavy sunshine can cause glare, which irritates your eyes over time.

Sometime around noon, position your display on your desk and then sit down in front of it. Make sure the power to the display is off. Look at the display and note the reflections you see. If you see a bright reflection of a nearby window — especially one directly behind you — you are likely to experience an uncomfortable glare during the day. You should consider moving your display so that it is perpendicular to nearby windows. If this is not possible, consider purchasing window blinds to control the amount of light that enters the room. You may also purchase an anti-glare filter for your display (although many Mac users tend to avoid such accessories as they deteriorate the look of the computer).

#### Lighting (Artificial)

Good lighting is important at night, too. The Power Macintosh G3, G4, and iMac ship with a dark-colored keyboard

that cannot be clearly seen in lower light conditions. Thus it's essential to have a nearby lamp that illuminates the keyboard and eliminates eyestrain. You can choose between three different types of desk lamps nowadays: halogen, incandescent, and fluorescent. Although halogen lamps are increasingly popular, their powerful, concentrated light tends to reflect off the desk surface, creating an uncomfortable glare. Incandescent lamps offer a softer, more dispersed light that is much easier on the eyes. Fluorescent lamps cast a white light over your work area that's evenly dispersed, but such lighting is often considered cold and impersonal.

The lamp is best placed next to your computer, where you can reach out and adjust its angle as needed. If you have other lamps in your office, you should position them so that they do not cause an uncomfortable glare as you work.

Turn on your lamps and sit down in front of your display. Look for reflections of the lamps on the display surface, and relocate them as necessary.

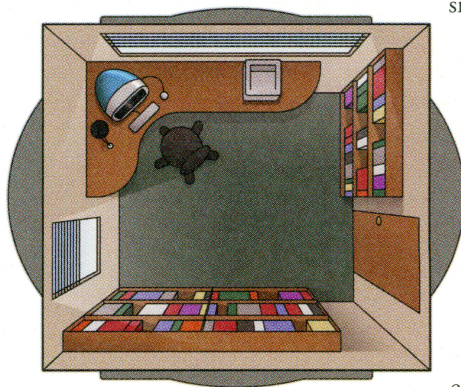
#### Flooring

The office floor is an important consideration. An office that has a thick carpet in it will make scooting around in your chair somewhat difficult.

If you must place your office furniture over a carpet, consider purchasing an anti-static pad to sit underneath your chair. Not only does it prevent static shocks frequently caused by socks sliding over the carpet fibers, it also allows you to move your chair much more easily. Hardwood and linoleum floors are ideal for offices, since your chair can

move around without restriction and there is no risk of static discharge that, in rare cases, may harm your computer equipment. A thin, rugged carpet is an acceptable alternative, providing both chair mobility and reducing the risk of static shock.

Your home office may be a work in progress for a considerable time; nothing happens overnight. Take it slow and consider your options carefully. In time you'll build yourself a comfortable room that you may never want to leave. **III**





## The Drop on IconDropper

**O**ne of the first tricks Mac users learn is how to apply a custom icon to a folder or file. Select the custom icon, pull up the Get Info dialog box, click on the icon in the window and Copy. Then select your target folder or file, pull up its Get Info box, click on the icon and Paste. A pretty basic process, if rather click-intensive.

The tedious nature of using the Finder to change more than a handful of icons was not lost on the wizards at the Icon Factory ([www.iconfactory.com](http://www.iconfactory.com)). Their solution is IconDropper, a shareware package that lets you gather all your assorted icons in one central location and apply custom icons with a simple click.

There are two primary ways to use IconDropper: drag and drop or control-click. For the first method, simply drag the folder or file whose icon you wish to change onto the IconDropper application. Or if you prefer to use contextual menus, control-click on the item and select Change Icon from the pop-up menu. Either way, the IconDropper window will open. In the right pane, you'll see a scrolling list of available icon packs, while on the left the icons contained in the selected pack will be displayed. Click once on any icon and it will instantly appear on your select file or folder.

Registering IconDropper unlocks additional features, including the ability to gather your loose icons into packs and convert icons into PICT files for importing into Photoshop. Most importantly, perhaps, IconDropper is one of those ultra-cool Mac-only tricks. As the folks at IconFactory like to say: "Make your PC friends jealous."

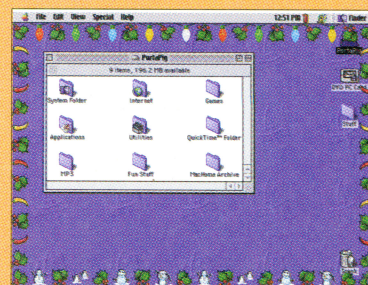
## DVD Dilemmas

**M**ac owners who purchased *The Matrix* this October hoping to watch it on their DVD-equipped systems were met with an unpleasant surprise: the Apple DVD player reports that the disc cannot be read. Don't worry: it's not because the disc is scratched. The real reason is somewhat more insidious: *The Matrix* DVD contains a data track that includes several cool extras, such as the screenplay, storyboards, and a game. Unfortunately, this data track is designed for Windows-based PCs and is thus incompatible with the Mac OS. When you pop *The Matrix* DVD into your Macintosh, the operating system sees the data track and loads it as a PC disc. This puts it at odds with the Apple DVD Player, which expects to find a digital-video disc.

Thankfully, there's an easy fix. As you push the DVD drawer closed, press Option-Command-I. This forces the operating system to ignore the PC format and load the disk as a DVD. You'll know it's loaded correctly if it has a generic CD icon instead of a DVD icon. (That seems terribly backward, I know. It's a quirk with Apple's DVD software). Once the DVD is correctly loaded, simply launch the Apple DVD Player and play the disc normally. This trick works with all PC-friendly (and therefore Mac-unfriendly) DVDs.

## Put up the Holiday Lights

**I**t is the season to deck the halls with boughs of holly. So why not decorate your Mac, too? Tiger Technologies' Holiday Lights allows you to do just that. The application encircles your



desktop with animated holiday lights, colored bulbs, and other seasonal odds and ends, all while playing your favorite Christmas carols in the background. The program also includes a selection of Hanukkah, Halloween, and Easter decorations and tunes. Custom ornaments and music can be added to give your Macintosh a unique look and feel. The program is \$20, from Tiger Technologies. Download a demo at [www.tigertech.com](http://www.tigertech.com).

## share your tips!

Got some tips you'd like to share with your fellow MacHome readers? Please send them to:

chris @ machome.com

All mail is assumed intended for publication, and we reserve the right to edit tips for brevity and clarity. When sending your tips, please make sure to include your full name.



# Mac OS Update Watch

## PowerBook G3 DVD-ROM Update

This update for bronze-keyboard PowerBook G3s fixes a bug that can stall the computer if there is no disc in the DVD drive during system startup. It is not intended for original PowerBook G3-series computers. You can find the update at

<http://asu.info.apple.com/swupdates.nsf/artnum/n11532>.

## Apple Memory Guide 8-99

The Apple Memory Guide provides important memory upgrade information for Macintosh computers (such as maximum capacities and memory types).

This latest edition includes information for the Power Macintosh G4, Power Macintosh Server G4 and iBook. You can find the guide at <http://asu.info.apple.com/swupdates.nsf/artnum/n10084>.

## ATI Video Software Update 1.0

The latest ATI video update provides improved 2D and 3D acceleration for iMacs and other Macintoshes with an on-board ATI Rage Pro graphics accelerator. You can find the update at <http://asu.info.apple.com/swupdates.nsf/artnum/n11475>. ≥ Mac OS 8.6 is required.

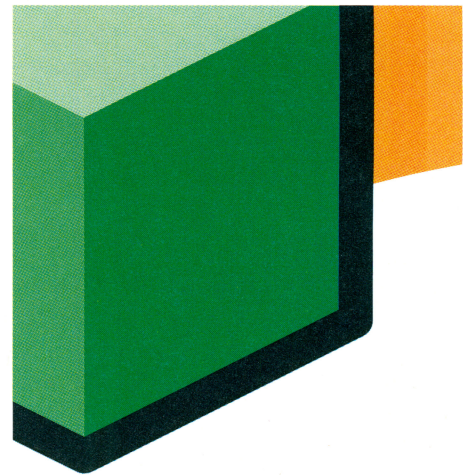
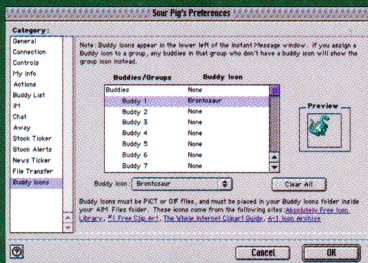
## iMac CD Update 2.0

**T**his iMac CD Update 2.0 reduces the amount of vibration caused by certain discs when they're inserted in the CD-ROM drive. The irregular layout of the label ink on some compact discs can cause them to become unbalanced when spinning at high speeds, leading to severe vibration. If you frequently hear a loud buzz when your CD-ROM drive is operative, you should install this update. You can find the update at <http://asu.info.apple.com/swupdates.nsf/artnum/n11129>.

## Put a Face on Your Chat Buddies!

### The latest version of AOL Instant

Messenger (3.5768) includes an unexpected new feature: the ability to pair an image of your friend with his or her screen name. Ask your friend for a self-portrait that is 50 x 50 pixels in size, in either PICT or GIF format. Once you receive it, locate your AOL Instant Messenger folder. Inside, you'll find another folder called AIM Files, and within that, a folder called Buddy Icons. Place your friend's photo in that folder and make a note of the file name. Go back to Instant Messenger and select Preferences from the Edit menu. Click on the item called Buddy Icons in the bottom left. You'll see your buddies listed at the right. Click on your friend's screen name. The pop-up menu immediately below your list of friends allows you to select an icon for that screen name. Select the file you just tossed into the Buddy Icons folder. Now, when your friend speaks with you, you'll see his or her picture in the bottom left of the message window. A word of warning, though: when you install a new version of Instant Messenger, be sure to transfer your Buddy Icons from the old application folder to the new application folder. Otherwise, you risk losing them when you trash the old folder.



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## Favorite Movies, Tracking Downloads, Flickering Monitors

**Q** I have lots of digital movies that I want to store in my QuickTime Favorites Drawer, but every time I add one it shows up as a black rectangle. This leaves me with a drawer full of black rectangles, preventing me from knowing what movie I am selecting. How do I select an icon to represent a movie I put in my Favorites Drawer?

*Josh Tane*

**A** Choose Organize Favorites from the Favorites menu. Click once on the movie you just added to the drawer, click Delete, and then click Done to return to



the movie window. You now need to select a frame to represent the movie. Click and drag the small black diamond in the ivory progression bar under the movie window. When you come to a frame you like, select Set Poster Frame from the Movie menu. Drag the black

diamond back to the beginning of the movie (all the way to the left), and select Save from the file menu. Now that you've updated the movie with a poster frame, simply choose Add Favorite from the Favorites menu. The icon that appears in the drawer will be a miniature version of the poster frame you selected.

**Q** I have a lot of downloaded files kept in Outlook Express 4.5, and I want to save them all to a Zip disk. Problem is, I can't find them! What do I do?

*Sergio Avendano*

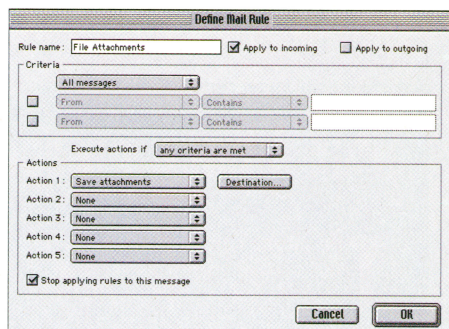
**A** Outlook Express compresses all mail, including downloaded attachments, to minimize the disk space used by the application. It's a great idea in theory, but in practice, it makes downloaded files very hard to access. You'll need to launch Outlook Express, locate the email message in question, and double-click on it. This will temporarily decompress the attachment, making it accessible to you.

This storage method can be a pain over time, especially if you just want to have all downloaded attachments accessible to you on a regular basis. But there is a loophole of sorts.

Go to the Finder and create a new folder called Email Attachments. Put the folder somewhere convenient, such as the desktop. Return to Outlook Express and select Mail Rules from the Tools menu. In the new window that appears, click New Rule. Give your new mail action a name, such as File Attachments. Next, you'll want to select All Messages from the first pop-up menu in the Criteria box. Now, in the Rules box, select Save

Attachments from the first pop-up menu. A button titled Destination will appear to the right. Click on it and select the folder you just created. Close the window to save the mail rule and collect your mail. All downloaded attachments will now be saved in that folder, making them much easier to find.

**Q** I use my iMac to get information on stocks. I have a choice of downloading, faxing, or emailing the data I collect;



the last two work fine.

Downloading doesn't quite go as planned. The download manager shows the matter complete, and there is a icon on the desktop (these are Adobe PDF files). However, when I double-click the document, I get a blank Internet Explorer screen with no report. Any ideas?

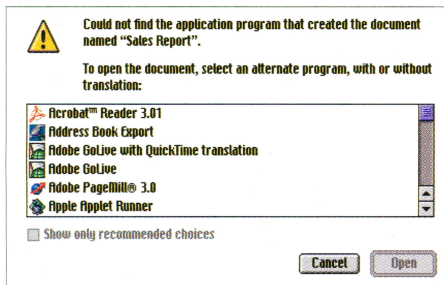
*Wayne Cypert*

**A** Sometimes, downloaded files will appear as the wrong file type, as gibberish within your browser, or as you've seen, they might not appear at all. If they appear as the wrong type, when you double-click the icons, you either open



the file as gibberish in your browser window, or you get a dialog box that reads: "Could not find the application that created the document 'Sales Report.'"

Unless a PDF file is corrupted, you



should be able to view it by putting it into the Adobe Acrobat Reader application. In some cases, the file may be automatically updated with the correct creator information, meaning that the next time you double-click it, it will correctly launch Acrobat and display your document. If you really can't see the file, try getting the latest version of Acrobat Reader (version 4.0) at

<http://www.adobe.com/prodindex/acrobat/readstep.html>.

"Rays of Light," the article on monitors in *MacHome's* September issue, was useful and helpful. I have a further question about refresh rate and the problem of monitor flickering. Can one obtain an upgrade that provides for a better than 75Hz refresh rate, for those of us who are unhappy with the quality of a monitor? Would a graphics accelerator card accomplish this purpose?

*Gregory Sisk*

Modern multi-sync displays have a set range of resolutions and refresh rates, which are listed in the Resolutions Control Strip Module. The number of resolutions possible depends on the video card installed in the Macintosh. Take a look at our article on video cards this month on page 16. It should help explain exactly what screen resolution is and how you can increase resolution with a new video card.

There is, unfortunately, no way to upgrade the capabilities of your monitor. They are set in stone at the factory. If you must regularly use a higher resolu-

tion, such as 1024 x 768 or 1152 x 870, and your monitor only supports those resolutions at a refresh rate of 65Hz or less, you will likely experience uncomfortable flickering.

I use the File Synchronization control panel a lot to synchronize files between my desktop Macintosh and my PowerBook. With considerable regularity, I get an error message stating that the control panel has run out of memory, after which it immediately crashes. Is this a common occurrence with a quick fix, or do I need to track down an errant extension?

*Dan Remmes*

The File Synchronization app has a bug in it that sometimes causes it to display the Out of Memory error and crash. For some reason, the application dislikes custom icons, so any folder you attempt to synchronize must have a generic, light-blue folder icon.

Inspect the target folder before you initiate synchronization. If it has a custom icon, select Get Info>General Information from the Finder's File menu. A window will appear, displaying the icon in the top left. Click once on the icon and press delete on the keyboard. The custom icon will be replaced by a standard blue folder. Close the window and return to the application. You can now synchronize without fear. ■

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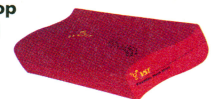
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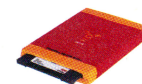


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## Fast Cache

### Storing Data Nearby for Quick Retrieval

**T**he word “cache” is derived from the French verb *cacher*, meaning “to hide.” In English, the word has come to mean a small hiding place for storing provisions. Why are caches important? Consider the following example:

Imagine you want to bake a cake. You go into your kitchen and discover you’re fresh out of flour, butter, and eggs. You haul on your shoes, run to the grocery store downtown, and buy enough ingredients for a single cake. Once you arrive home, you add your ingredients to a bowl, mix them together, and finally pour the batter into a pan. A few minutes in the oven and your cake is done.

Now let’s add a twist to our story. You’ve left your window open and the yummy cake smell wafts outside. Mrs. Rosedale, your nosy neighbor, immediately rushes over to inspect your freshly baked goods, and you agree to make a cake for her, too. You return to the kitchen, but you’re once again out of flour, butter, and eggs, and it’s back to the grocery store for the needed ingredients. Upon your return, you bake another cake for Mrs. Rosedale.

Just then, your wife’s boss drops by with some sales reports. He smells the first cake and can’t resist; before long, that cake is gone and you have to make yet another. Once again, you run to the grocery store for the ingredients.

This time, you decide to play it smart. Running to and from the store is inefficient and slows the process. You want to make sure you have enough flour, butter, and eggs nearby just in case you need to make another cake. You purchase ample

amounts of ingredients, which can then be stored in the pantry of your kitchen. There, they can be quickly accessed if you need them. This is the essence of a cache.

Your Macintosh regularly performs identical tasks (like baking a cake) with identical components (like flour, butter, and eggs). Having these components stored nearby can speed the process considerably. Your Macintosh has several different caches to help increase its efficiency: level 1 cache, level 2 cache, and a disk cache.

Level 1 cache is a small amount of memory built into the computer’s processor. The PowerPC G3 has 64K of level 1 cache. This is used to store frequently used instructions so that the processor doesn’t have to send a request for the data to either the level 2 cache or the computer’s standard random-access memory (RAM). The processor can speak to its internal cache at its native operating speed (say, 400MHz). If it has to communicate with the computer’s memory, the speed slows considerably.

Level 2 cache is external to the processor. In current Macintosh systems,

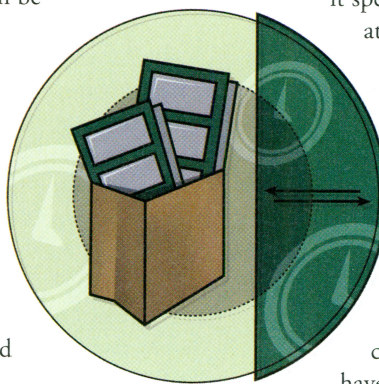
the level 2 cache is located on the processor daughtercard and is between 512K and 1MB. It stores frequently used instructions so the processor doesn’t have to communicate with the computer’s RAM. Special circuitry allows the processor to converse with the level 2 cache at half its operating speed. So, if the processor operates at 400MHz, it speaks to the level 2 cache at only 200MHz.

A disk cache is a segment of RAM dedicated to storing data that is frequently accessed from your hard drive. To see the disk cache in action, go to the Finder and double-click on a folder you haven’t accessed in awhile.

Choose a folder that has a large number of files in it — perhaps the Extensions folder in your System Folder. Note the speed at which the files appear. Now, close the window and double-click on the folder icon again. You’ll notice the files appear more quickly this time — because the data was already available in the disk cache.

#### Caching In

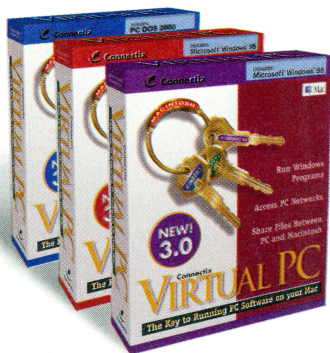
Just as running to the grocery store each time you bake is slow and inefficient, so too is sending a request for the same data each time you want to use it. The caches in your Macintosh keep frequently used data handy to speed system performance, so that you’re not forced to endure long pauses again and again. ■■■







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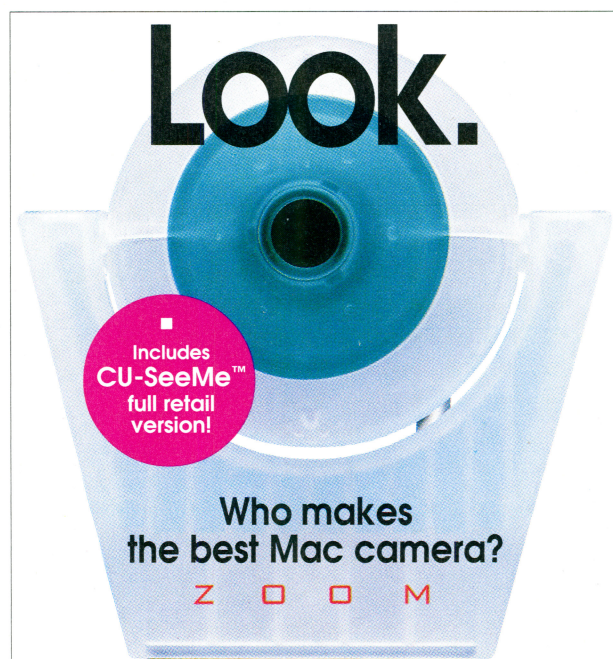




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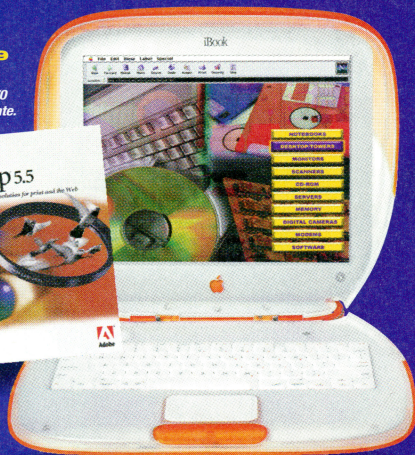


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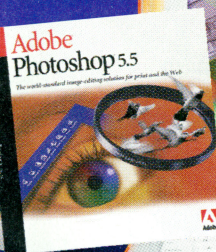


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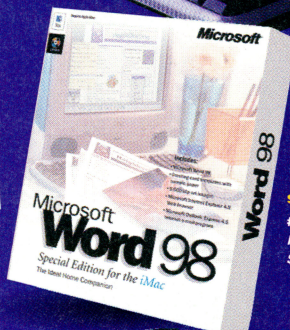
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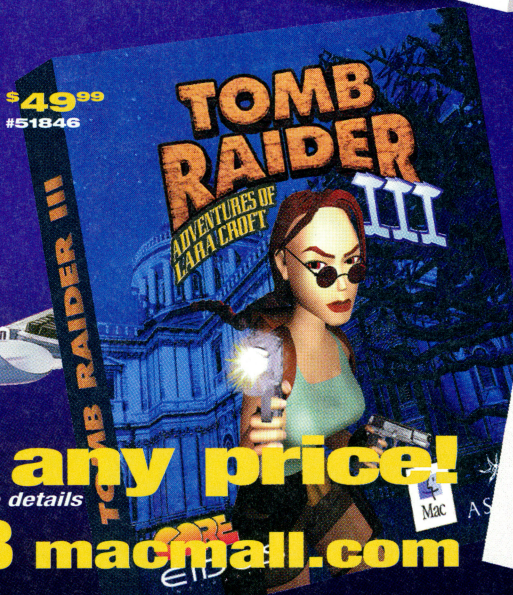


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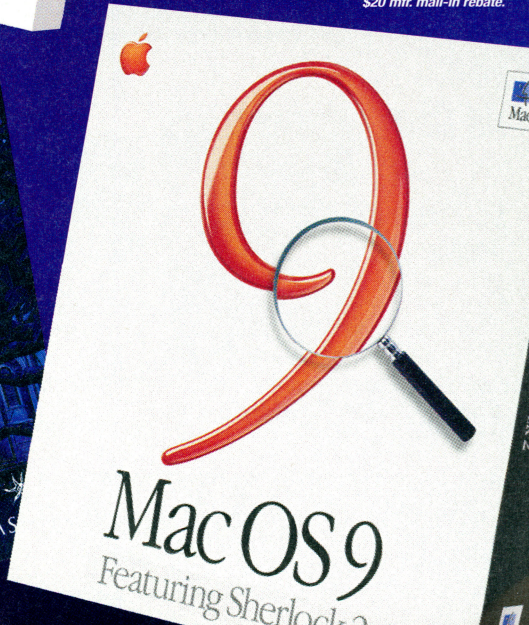
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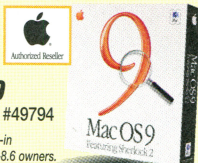
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- 3.2GB IDE hard disk drive
- Built-in 24X CD-ROM drive

### Connectivity.

- One 12-Mbps Universal Serial Bus (USB) port
- Built-in 10/100BASE-T Ethernet
- Built-in 56K modem

### Great graphics and video features.

- ATI RAGE Mobility graphics controller with 2X AGP for 2D/3D
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- 12.1-inch (diagonal) built-in TFT SVGA active-matrix display
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- Mac OS 8.6
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### Storage

- Internal 13GB Ultra ATA hard disk drive

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**400MHz**

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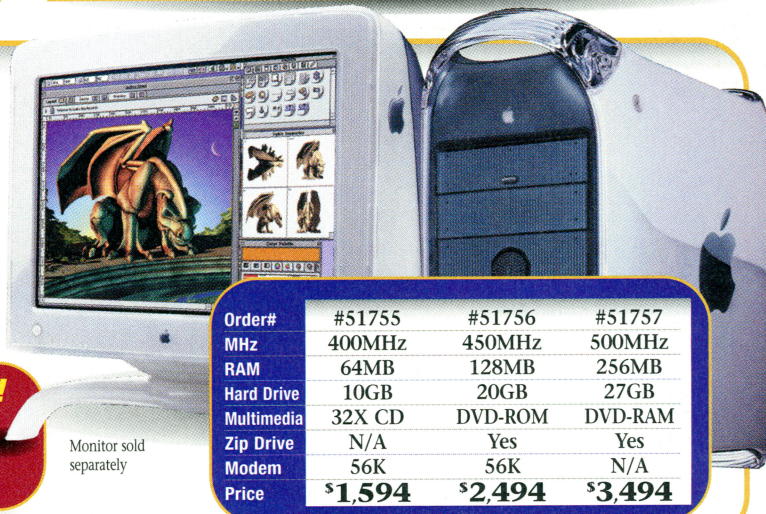


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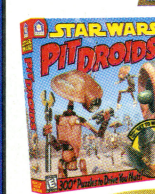
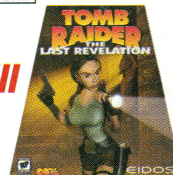
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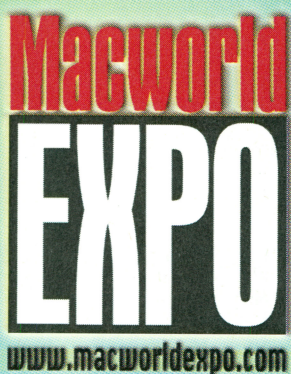
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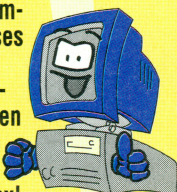


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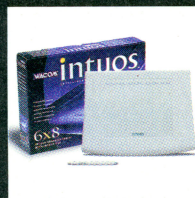
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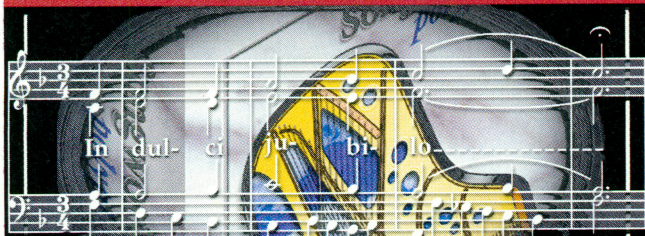


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The gPort universal serial adapter is the perfect companion for your new blue G3 computer. Designed from the ground up with the G3 in mind it supports every serial device that works on your older Macs.

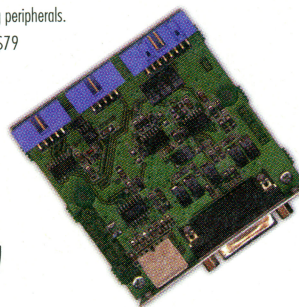
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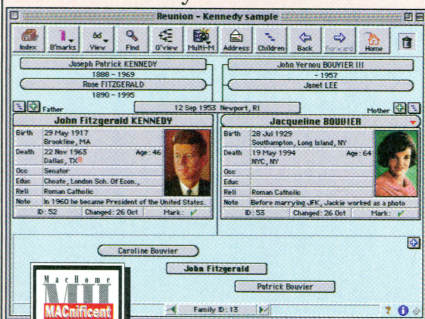
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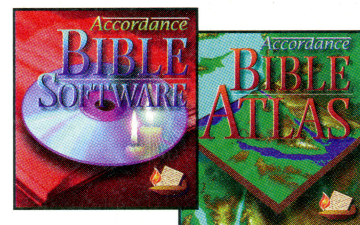
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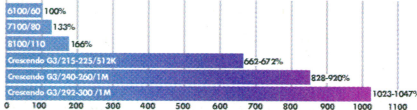


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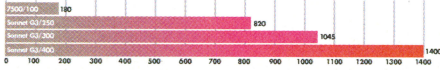
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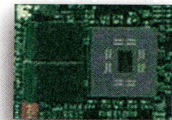
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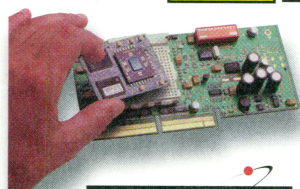
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# ihnatkko [ Commentary ]

By Andy Ihnatko

## The Name of the Beast

### A G3 by Any Other Name

**T**he name of my PowerBook — actually, even the idea of my PowerBook's having a name — wasn't my idea. It was the PowerBook's.

It came from that part of the wetware that has served me well enough in the past that I trust it implicitly. But even as I typed it into the machine's network configuration dialog, I asked myself: Why "Lilith"? And the wetware responded: Because like its mythological namesake, Lilith roams the Earth, spawning new demons to torment

Humanity.

Well, I've never been terribly confident with what I write when I'm on the road.

But my first big desktop Mac had a "real"

name, it chose to Rumpelstiltskin it. It ultimately gave up trying to assess its *wa* and simply named it after its boot volume.

It's a Mac clone, circa 1995. For you newcomers, Apple's idea of licensing out Mac OS-compatible hardware designs to third parties was probably the last truly disastrous one the company managed to implement. Apple

thought the clone licensees would manufacture the tame, consumer Macs missing from their own product line; the licensees thought they'd make the speed-demons that Apple made most of its money from. Such was this machine — a 132MHz PowerMac based on the 604e processor. Once. Of course, many times in the past four or five years, it's been forcibly upgraded to keep up with the demands of modern software and hardware. The most recent addition was a 64MB memory module, which made the thing immediately spit pea soup through its disk slot, just like Linda Blair. Was it a bad module, or maybe I fried it accidentally while installing it? I got a replacement. Same startup crash. It wasn't the DIMM (dual inline memory module).


And so, I had to deal with the one insurmountable bummer facing anyone with an old Mac on their desks, clone or not: the Himalayan maze of variables that confronts you when something goes wrong and you've eliminated the one most obvious suspect. Is it the custom driver for the non-Apple boot drive? Is it a PCI bus failure? Something to do with the white-hot graphics accelerator? Is the

third-party G3 daughtercard clocked too fast for the data bus? It's not trying to use the old cache, is it? Dang, I've got four different makes of memory installed here ... is one of them conflicting with the others?

At some stage, you have to recognize that a Mac is more than a feature list. My old PowerMac now has a 400MHz G3, USB, a pile of memory, and a canyon of storage ... but an upgraded legacy Mac is not a Macintosh G3. A Mac G3 has the same specs, but its most important feature is the fact that all of these components were designed specifically to work together. Big-time upgrades are a great way to stretch a machine's useful life, but even as you marvel at the exponentially enhanced speed and utility, never forget that the day will inevitably come when you'll have to have the vet put this dog down.

Well, I fixed it — turned out to be a memory incompatibility — but it took me hours of trial and error to lock the problem down. One good thing did come out of all of this, though: I learned the machine's true name.

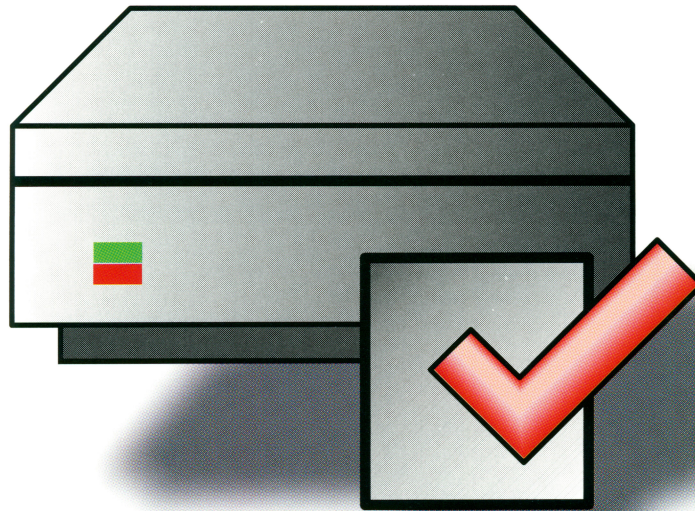
From the movie *National Lampoon's Animal House*: Stephen Furst and Tim Hulse are two freshmen at the end of a long night of being rejected by every fraternity on campus. Except for Delta House. "Don't worry," Furst assures his pal. "My brother was a Delt. That makes me a Legacy. They have to take me in!"

And when John Belushi came up with a name for this pledge, the reject who was part of the team only because he had a longstanding connection, and thus it'd be less work to keep him than to get rid of him ... well, that name became my desktop Mac's name: "Flounder." 

**The most recent addition to my older Mac was a 64MB memory module, which made the thing immediately spit pea soup through its disk drive, just like Linda Blair.**



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